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THE

TERRITORY OF WYOMING.

ITS

History, Soil, Climate,

RESOURCES, ETC.

PUBLISHED BY AUTHORITY OF THE BOARD OF IMMIGRATION.

LARAMIE CITY:
DAILY SENTINEL PRINT.
DECEMBER, 1874.

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HISTORY.

The act authorizing the organization of Wyoming Territory, was approved by the President, July 25th, 1868.

The Territorial organization was completed on the 10th day of May, 1869, and the machinery of the new political division set in motion.

The Territory was formed from the southwest portion of Dakota, together with a small portion from the Territories of Utah and Colorado.

GEOGRAPHICAL POSITION.

EXTENT.

Wyoming embraces all that portion of country situated between the 41st and 45th degrees of north latitude, and the 27th and 34th meridians of longitude west from Washington.

It has an average length from east to west of 355 miles, with a width of 276 miles, embracing an area of nearly 98,000 square miles, or about one and a half times as large as all the New England States combined.

It is divided into five counties, running the entire length of the Territory, from north to south. These are named respectively, beginning with the eastern boundary, Laramie, Albany, Carbon, Sweet Water, and Uinta. The county-seats, in the same order, are Cheyenne, Laramie City, Rawlins, Green River, and Evanston.

A country of such vast extent, and occupying such an advantageous position, must possess a great variety and extent of resources. Although but a small portion of the Territory, principally on the southern border along the line of the Union Pacific Railroad, has been explored and partially settled, still enough has been done to prove to the most incredulous, that Wyoming possesses resources that offer extraordinary inducements to the capitalist, the miner, the farmer, and all persons seeking homes in the West. It is proposed to set forth some of the most prominent of these resources, and to prove by facts and figures that this Territory possesses all the advantages claimed for it.

The principal resources of Wyoming are stock-raising, mining and timber; any one of these branches of industry is in itself sufficient to ensure great prosperity and wealth to any community when carried on extensively, but when they are all available, the country possessing them has a sufficient guarantee for rapid increase in wealth and population; furthermore, when we take into consideration the fact that these branches naturally tend to induce manufactures and agriculture, we have then all those industrial pursuits which are beneficial to any and every country, and which in a new country particularly attract the attention of capital and labor. The clear, pure atmosphere, fine climate, and numerous mineral and hot springs, will attract the invalid; the endless varieties of game furnish abundant sport for the hunter and sportsman; and the beautiful and diversified scenery make it an attractive place of resort for tourists, pleasure seekers, and all who love to see Nature in her most sublime forms of grandeur and magnificence.

SOIL.

The soil is, on the bottom lands, loam; on the uplands, sand loam. The soil of the valleys of all the streams, and along the bases of many mountain ranges is fertile, and wherever the lands can be properly irrigated abundant crops are raised. The yield is very large; wheat, oats, rye, barley, and all the root vegetables are successfully cultivated. The grain is of a superior quality, and the vegetables are remarkably large and fine. The soil on the uplands produces a natural grass, which grows in abundancy, is very nutritious, and will afford sustenance for millions of head of cattle, horses and sheep. It has been satisfactorily demonstrated that the vast plains in the centre of the southern portion of the Territory, which constitute a part of that great bugbear of early travelers across the plains, and formerly known as the "Great American Desert," is underlaid with rich deposits of iron ore and coal. Other valuable minerals and metals are known to exist in this section and only need the strong arm of labor to develop them.

CLIMATE.

The climate is mild, even and pleasant; the air is pure and bracing. The winters are short, with but very little severe weather. In those portions of the country which are sheltered from the winds the severe weather is hardly felt, and stock may be kept throughout the winter with little shelter.

The following monthly meteorological record compiled from the records of the United States signal station at Cheyenne, showing the mean barometer and thermometer for the year 1871, and part of 1872, will show more conclusively than pages of description can do, that the climate is desirable. We are indebted to Mr. Asa C. Dobbins, the observer at Cheyenne, for this record.

METEOROLOGICAL TABLE.

MONTH.	Mean Barometer.	Mean temperature; daily observations, 9:44 A. M., 2:44 P. M., 9:44 P. M.	Prevailing winds; from what direction.	Amount of rain-fall in inches and decimals.
1871.	Inches.			
October	29.419	46°	West	0.245
November	29.384	28°.9	Northwest	0.66
December	29.418	28°	West	0.16
1872.				
January	29.929	26°.6	Northwest	0.02
February	29.856	30°.95	West	0.27
March	29.917	33°	Northwest	0.38
April	29.876	38°.3	West	1.61
May	29.990	52°	North	1.99
June	30.041	61°.5	West	1.84
July	30.098	64°.5	West	3.90
August	30.116	65°.1	West	2.05
September	30.038	55°.6	Northwest	1.03

SYNOPSIS FOR TWELVE MONTHS.

Mean Barometer, inches	29.84
Mean Temperature	44°.20
Total amount of rain-fall, inches	14.155

METEOROLOGICAL TABLE—CONTINUED.

MONTH.	Mean Barometer corrected for temperature and elevation.	Mean temperature; three daily observations; 5:44 A. M., 2:44 P. M., 9.44 P. M.	Prevailing winds; from what direction.	Amount of rainfall in inches and decimals.
1872.	Inches.			
October	30.29	46°.4	Northwest	.33
November	29.95	28°.2	W.andN.w	.03
December	29.914	23.°4	West	.03
1873.				
January	29.831	24°.6	Northwest	.03
February	29.778	25°.0	West	.02
March	29.911	39°.7	West	.38
April	29.91	34°.4	Northwest	.92
May	29.854	49°.2	West	2.41
June	29.006	65° 9	West	1.77
July	30.089	69°.7	West	1.10
August	30.112	69°.2	West	2.07

SYNOPSIS FOR ELEVEN MONTHS.

Mean Barometer, inches	29.965
Mean temperature	43°.24
Total amount of rain-fall, inches	9.09

These figures all go to show that the annual mean temperature is a little less than 50 degress.

Cheyenne is situated in an exposed position, and from this fact in connection with its high altitude the records indicate more severe weather than would be experienced in lower and more favorable locations; and so far as the climate is concerned these indications are not as favorable as could be shown in many portions of the Territory.

All bronchial and pulmonary diseases find relief and a speedy cure; the best proofs of the beneficial results of this climate are the numbers of men and women in Wyoming, who came here as a last resort, scarcely expecting that they would ever find relief, much less cure, and who are to-day strong, hale and hearty; living proofs of the benefits that can be derived from our climate by invalids suffering from diseases of the throat or lungs.

AGRICULTURE.

It can be safely asserted that no portion of the Union offers more inducements to the agriculturalist than Wyoming. Although all branches of industry are but in their infancy, it has already been proved that this one is safe and very lucrative. The soil is susceptible of a high state of cultivation, and with proper irrigation will yield large crops and a handsome revenue. All kinds of vegetables can be cultivated successfully; the small grains do well and the hardy fruits will undoubtedly thrive.

But to cultivate the soil with any certainty of success it is necessary to irrigate. This process, no doubt, seems to many eastern people to be one attended with great labor and difficulty; but it is very simple, and when properly managed requires but little labor. Although almost any person of ordinary judgment can run out a ditch, it is advisable to use proper instruments, and pursue methodical plans. Ditches can be taken out of the streams, and by a little care and forethought be made to supply an abundance of water for several farms; thus saving expense and labor.

These ditches will in many cases answer the purpose of fences, and will cost less than any kind of fencing that can be obtained.

A ready market can be found for all the produce that is offered; the prices are good, much higher than in the eastern States. Large quantities of farm products are brought into the Territory from the States and Territories on the east, south and west; the farmer in Wyoming thus obtains for his produce the price obtained by farmers in neighboring States, plus the amount paid for transportation to market; this item is in itself a very good margin and varies from 50 to 200 per cent. on original cost.

The demand for farm produce is constantly increasing, and there is no danger of the business being overdone for a great many years to come. As the mining interests of the Territory are developed the demand will increase rapidly, and it is an established fact that better prices and the readiest markets are always found in mining communities.

The following is a fair average of the prices paid for produce:

Potatoes, 1½ to 3 cents per pound.
Turnips, 1 to 3 cents per pound.
Onions, 2½ to 5 cents per pound.
Cabbage, 2 to 8 cents per pound.
Beets, 3 to 8 cents per pound.
Other garden produce in proportion.

These are some of the advantages and inducements which are offered to agriculturalists in Wyoming; the subject might be enlarged upon to great length, but enough has been said to convince the practical, thinking farmer that the business can be carried on successfully, and with large profits.

There are millions of acres of lands along the bottom lands of the streams that can be taken up under the pre-emption and homestead laws, thus placing it within the means of every man to obtain a good comfortable home. The value of these farms increases with wonderful rapidity, and before a man is hardly conscious of it, he has a valuable farm and is independent. A synopsis of these laws will be found in the appendix to this pamphlet.

STOCK GROWING

AND ITS PROFITS.

The safety and profitableness of this business are already so well established that a very elaborate dissertation on the subject seems almost superfluous. But as this is one of the leading resources of the Territory, and is certain to be carried on very extensively, it must be treated upon in this pamphlet, and a few facts and figures will be given, which are based on actual experiment.

Below is given an estimate of the profit, expenses and other information concerning the actual management of a capital of $25,000.00, following it for a sufficient length of time to demonstrate the immense profit resulting from the investment.

A person or company starts with a capital of $25,000; assume that of all young or stock cattle, one-half of all "2 year olds" are by the next spring "cows," and balance "beeves;" also that 80 per cent. of cows have calves that mature. Use high grade Durham Bulls first year.

Buy "Texas" cattle that have been wintered over on the Arkansas River (driven from Texas the year before). They can be bought delivered on the range in Wyoming, say August, as follows:

100 yearlings	$ 7		$ 700
200 2-year-olds	11		2,200
600 cows	16		9,600
500 3-year-olds	16		8,000
100 4-year-olds	23		2,300
250 Calves			
1,750			$22,800

Above is a fair average of the grades as they would tally out; it is cheaper to buy out a herd than to "pick." The calves are thrown in. Calves born during the trip are generally killed, thus reducing the number somewhat from the ordinary 80 per cent. of increase.

FIRST YEAR—EXPENSES.

2 men at $35.00, and board $20, per month $660.00		$1320 00
1 foreman $50, and board $20		840 00
9 horses at $75.00		675 00
Grain, 8 lbs. per day per horse, at $1.25 per 100 lbs		328 50
1 wagon $125, 2 mules and harness, $400,		525 00
2 houses, at $100 each		200 00
Mower, rake, and plow		200 00
Personal expenses say		1,000 00
		$5,088 50
Sell in Sept. or Oct. 100 beeves, say 1,100 lbs., at 3c. per lb gross, $33.00 per head	$3,300	
100 cows, (old,) say 900 lbs. each, at 3c. per lb., $27.00	2,700	
Add surplus of capital	2,200	8,200 00
		$3,112 50
Buy 200 2-year-olds at $15.00		3,000 00

SECOND YEAR—ON HAND.

	250	yearlings, last year's calves.
	100	2-year-olds, last year's yearlings.
	400	3-year-olds, last year's 2-year-olds,
	750	cows, from last year's cows and ½ of 3-year-olds.
	250	beeves, ½ of last year's 3-year-olds.
Half-breeds	600	Calves 80 per cent. of cows.
	2,350	

EXPENSES.

Grain and men same as last year, and 1 extra man	$1,320 00 660 00 328 50		
Personal expenses	2,000 00		$4,308 50
Sell 200 beeves, at $33.00	$8,250 00		
Sell 50 old cows, at $27.00	1,350 00		9,600 00
			$5,291 50
Buy 300 3-year-olds at $18.00			5,400 00

[NOTE.—It may be well to remark here that it would be a better investment to buy yearlings or two's, but the herd would wander a great deal more with so many young cattle, and it would be necessary to keep more men and horses.]

THIRD YEAR—ON HAND.

Half-breeds	600	yearlings, last season's calves.
	250	2-year-olds, last season's yearlings.
	100	3-year-olds, last season's two's.
	900	cows, 750+200—50.
	200	beeves, ½ of last year's three's.
½ and ¾ breeds	720	calves, 80 per cent. of cows.
	2,770	

EXPENSES.

Same as last year and say $200 extra	$4,500	
Sell 200 beeves at $33.00	$6,600	
Sell 100 old cows at $27.00	2,700	9,300
		$4,800 00
Buy 250 three's, at $18.00		4,500 00

FOURTH YEAR—ON HAND.

720 yearlings, ½ and ¾ breeds.
600 two's, ½-breeds.
250 three's.
975 cows, 900+50+125—100=975.
175 beeves, 50+125.
½, ¾ and ⅞ breeds, 780 calves.

EXPENSES.

Same as last year	$4,500 00	
Sell 175 beeves at $33.00	$5,775 00	
Sell 100 cows at $27.00	2,700 00	8,475 00
		$3,975
Buy 250 three's at $19.00		4,500 0

FIFTH YEAR—ON HAND.

780 yearlings, ½, ¾ and ⅞ breed.
720 two's, ½ and ¾ breed.
600 three's, half-breeds.
1125 cows, 875+125+125—100=
250 beeves, ½ of last year's three's.
900 calves.

EXPENSES.

Same as last year, and 1 extra man	$5,160 00	
Sell 250 beeves at $33.00	$8,250 00	
Sell 125 cows at $27.00	3,375 00	11,925 00
		$6,465 00
Buy 350 three's at $18.00		6,300 00

[NOTE.—In this estimate the cost of bulls has been omitted, as the grade, Durham, needed, would not cost over $75.00 each, and they will bring cost at any time. They should be bought when yearlings and two-year-olds, and by the car-load. The grade required can be obtained from the farmers of Kentucky, Illinois, Iowa, and some other Western States.]

SIXTH YEAR—SETTLEMENT.

ON HAND.

½, ¾ and ⅞ American,	900	yearlings at $15.00	$13,500 00
do do do	780	two's at $20.00	15,600 00
½ and ¾ do	720	three's at $30.00	21,600 00
300 half-breed	1475	cows, { 300 at $30.00 / 1175 at $25.00 }	38,375 00
300 half-breeds,	475	beeves at $35.00	16,625 00
½, ¾, ⅞, &c.,	1180	calves at $12.00	14,160 00
			$119,860 00

MATERIAL, STOCK, &C., ON HAND.

9 horses at $50.00	$450 00	
Wagon $75.00, mules and harness $300.00	375 00	
Good will of range	$1000 00	1,825 00
		$121,685 00
Expenses same as last year		5,100 00
Gross capital		$116,585 00
Original cost	$25,000 00	
Interest 5 years at 7 per cent	8,750 00	33,750 00
Net profit 5 years		$82,835 00

In the last scale of prices beeves are estimated at $35.00. This is because they are mostly half-breeds, and will weigh more and bring better prices than common Texas. The price of stock on hand is based on the assumption that it is sold to close out. Better prices can be obtained if time were taken to obtain the most advantageous purchaser. Observe that in the above time, the increase is just beginning to show. In ten years the profits would be much larger comparatively. No allowance has been made for death or loss by straying, etc., as the estimates are large and liberal and will more than cover losses sustained by these causes.

Five per cent. is a liberal allowance for all such losses.

SHEEP GROWING.

This is another very important branch of stock-growing, and is rapidly assuming vast proportions in this Territory. Large amounts of capital are annually invested in the business, and its security and large profits are attracting the attention of capitalists and stock men throughout the country.

We are not at present in possession of figures concerning this business for a number of years, except those based on the actual operations for one or two years. Below is given a statement taken from the accounts of a gentleman in this Territory, who is engaged in the business It shows the business for a portion of one season only, and therefore does not make as favorable a showing as if followed through five or ten years. The flocks increase with great rapidity, as shown by the statement, and after four or five years the profits are almost incredible.

SHEEP ACCOUNT, FROM DEC. 1ST, 1873, TO AUG. 1ST, 1874.

DEC. 1ST.	STOCK ACCOUNT.		DR.
	1650 wethers at $2.00	$3,300 00	
	1550 ewes at $2.50	3,875 00	
	22 Merino bucks	465 00	
FEB. 27.	203 wethers bought	366 75	
	Horses, wagon, tools, &c.,	600 00	
	Value of improvements, cost	1,000 00	
			$9,606 75
	Expense account, including shearing, lambing, marketing, wool, labor, provisions, &c., Dec. 1st to Aug. 1st	$1,441 81	
	40 tons hay at $8.00	320 00	
	*85 sheep lost during the winter, at $2.50	212 50	
			1,974 31
			$11,581 06
	RETURNS.		CR.
	1800 fat wethers sold at $2.50	$4,500 00	
	Wool sold	3,300 00	
	85 sheep pelts at $1.25	106 25	
			$7,906 25
AUG. 1864.	STOCK ACCOUNT.		
	1515 ewes on hand, $2.50	$3,757 50	
	1200 lambs, improved. $3.00	3,600 00	
	22 bucks	465 00	
	Horses, wagons, tools, &c.,	600 00	
	Value of ranch improvements	1,000 00	
			9,422 50
			$17,328 75
	Profits to balance		$5,777 69

Total outlay, $11,581.06; total profit, $5,777.69, or about 50 per cent. profit on the outlay.

But, it will be noticed, that the returns commenced to come in before the whole outlay was incurred; the average outlay was about $8,000.00, while at no time was there $10,000.00 actually laid out.

The sheep purchased were all Mexican, with the exception of the bucks, which are of the Merino strain. Sheep growers say that the Mexican sheep are superior to the Merinos as mothers, and seem better adapted to the country, being good travelers and requiring but very little care and attention. The Merino wool is superior to the Mexican, the latter being rather scant and coarse. But the first cross shows a decided improvement in this respect and in many others, and it seems probable that by careful management a new strain might be developed, which will combine the good qualities of both breeds.

*Of the 85 sheep killed during the winter, 70 head were killed by an accident that could have been avoided.

A great many figures might be given, showing the profits that can be realized from an investment of this kind, but the example given is a fair average, and shows as conclusively what can be done, as if fifty were given.

But it is not always and everywhere, regardless of circumstances, that such results ensue; those who engage in the business now will have the benefit of the experience of others, and will not run as many risks as if they were engaging in a new enterprise. Care and attention are necessary to insure success. Any person who will exercise ordinary discretion and judgment can certainly reap a rich reward.

There is one essential point which naturally presents itself in this connection, and that is the nature of the grasses, and the extent of country suitable for grazing purposes.

GRASSES.

The grasses of Wyoming Territory are, on the uplands, the bunch or "buffalo" grass, the "gramma" grass, and a species of "blue grass," together with a great many other varieties which are found on the bottom lands. The annual rainfall is about 18 inches, inclusive of snow-fall reduced to water; (12 inches of snow making one inch of water.) Most of the heavy rains fall in the latter part of May, in June and the early part of July. The absence of heavy rains in the fall, and the pure, dry atmosphere cures the grasses on the ground, and by the 1st of September it has become uncut hay; this furnishes the famous winter-grazing for which Wyoming is already noted. Cattle and horses graze the year round, without any food except this, and with no shelter. The plan of endeavoring to keep sheep without any shelter whatever, is not recommended. Although there are seasons when shelter is not needed, it is best to provide for emergencies; the cost of erecting the shelter is very small and soon pays for the outlay. The sheep come out fat and healthy in the spring, and diseases prevalent among them in the Eastern States are unknown here.

The editor of the *Western World* paid a visit to the Territory some months since, and, after a personal examination, writes:

"For a space of fully 700 miles long and 200 miles broad, along the bases of the Rocky Mountains, there is one of the finest and cheapest grazing countries in the world. The valleys, bluffs and low hills are covered with a luxuriant growth of "gramma" or "bunch" grass—one of

the most nutritious grasses that grows. It grows from 6 to 12 inches high, and is always green near the roots, summer and winter. During the summer, the dry atmosphere cures the standing grass as effectually as though cut and prepared for hay. The nutritious qualities of the grass remain uninjured, and stock thrive equally well on the dry feed. In the winter what snow falls is very dry, unlike that which falls in more humid climates. Again, the snow does not stick to the sides of the cattle and melt there, chilling them through, but its dryness causes it to roll from their backs, leaving their hair dry. There is no "stabling" required; stock run out the year round, and the cost of keeping is just what it will cost to employ herders. The advantages are great, and a new and vast industry is fast springing up."

The following letter from one of the heaviest stock growers in the West, furnishes another proof of the advantages, coming as it does from a man of extensive experience and unquestionable reliability. He has given proof of his confidence in the country, as he has thousands of cattle, horses and sheep in Wyoming. The letter was addressed to Dr. H. Latham, formerly Surveyor-General of the Territory, and one who did much to make the advantages of the Rocky Mountain region known to the world.

OMAHA, NEBRASKA.

DEAR SIR: I cheerfully give you for publication the result of my experience in grazing in the country west of the Missouri river.

My first grazing in that country was in the winter of 1859. Since then, for eleven winters, I have grazed more or less stock, including horses, sheep and cattle in Colorado, Wyoming, Utah and Montana. The first seven winters I grazed work oxen mostly. Large work cattle winter on the grasses in the valleys and on the plains exceedingly well, and are in good condition for summer work by the first of May. The last four winters I have been raising stock and have had large herds of cows and calves. The present winter I have wintered about eight thousand head. They have done exceedingly well. We have lost very few through the whole winter, and those lost were very thin when winter commenced.

We have no shelter but the bluffs and hills, and no feed but the wild grasses of the country. We have had three thousand sheep the past winter, and they are in the best of order. Many are being sold daily for mutton. Like the cattle they require no feed nor shelter. The high, rolling character of the country, and the dry climate and the short, sweet grasses of the numerous hillsides, are extremely fa-

vorable to sheep raising and wool growing. I have been interested in stock raising in the States for a number of years, where we had tame grass pastures and tame grass hay and fenced fields and good shelter for the stock, and good American and blooded cattle, and an experienced stock raiser to attend to them, and after a full trial I have found that with the disadvantage of the vastly inferior Texas cattle, and no hay, nor grain, nor shelter, nothing but the wild grass, there is three times the profit in grazing on the plains; and I have, as a consequence, determined to transfer my interest in stock raising in the States to the plains.

There is no prospective limit to the pasturage west of the Missouri river.

All the wool, mutton, beef and horses that the commerce and population of our great country will require a hundred years hence, when the population is as dense as that of Europe, can be produced in this country, and at half the present prices.

Truly Yours, EDWARD CREIGHTON,
President First National Bank of Omaha.

The consideration of the subject of stock-raising naturally leads to the inquiry as to what can be done in the "dairy" business. Hundreds of testimonials can be obtained from persons in every portion of the Territory, who are engaged in the business, as to its success and profit. Two letters only will be presented at this time; they give the experience of two of the oldest dairymen in the Territory, they having been engaged in the business here since its first settlement.

DEAR SIR: I have been engaged in dairying in Wyoming since the fall of 1867. That season I milked fifteen cows, the summer of 1868 thirty cows, the summer of 1869 thirty-five, and that of 1870 forty-five. We sell milk for the six months commencing April 1, at thirty cents per gallon. My cows averaged during that time 108 dollars worth of milk. For the other six months we sell milk at 40 cents per gallon, and they average fully as much per head in value, or 216 dollars per head per year. In winter I stable and feed hay at night and graze during the day. I have made butter and cheese in the Western Reserve in Ohio, and I know that a cow will give as much milk, or make as much butter or cheese, on our wild grass as she would on the richest clover or bluegrass anywhere. * * *

SIR: I have been a dairyman in Pennsylvania and Illinois, and also in Montana. I commenced the same business in Wyoming in the early fall of 1867. In 1868 I milked twenty cows; the summer of 1869, thirty-eight; the summer of 1870, fifty. * * For the months of June, July, and August they averaged 18 quarts of milk daily. For the other

nine months they averaged over two gallons. In the best parts of the season they averaged one and a half pounds of butter per head daily, and the whole year they would average one pound per day. From the same cow, after acclimation, I can make a half more butter and cheese than can be made in the most noted dairy regions of America. Cows that are milked winters are fed on good bright hay; those that are not, graze for themselves and are in fine order in the spring when the milking season commences. ***

MINING.

The importance of presenting this subject properly is not always realized, as it is one over which the most cool-headed men in the world are apt to become excited at times. People are apt to be suspicious of any country claiming mineral resources, (and particularly the precious metals,) until some big "strike" is made, when they almost invariably drop their suspicions and become as wild and enthusiastic as they were doubtful. Although it is not expected that this subject will be presented at this time, in such a manner as to meet the wishes and wants of all who may read it, still the little that may be said will consist of facts and reliable statements. This Territory is underlaid with valuable, extensive and productive mines, including nearly every known mineral. Gold and silver have been discovered in every mountain chain in the Territory, and some of them are being profitably worked. There are also numerous and extensive deposits of iron, copper, plumbago, galena &c, all through the Territory.

Good mines of copper and silver have been discovered in the Black Hills—a spur of the Rocky Mountains,—about 20 miles north of Cheyenne. A company has been organized and is now working and developing the mines. Good placer diggings have been found at a distance of from 20 to 100 miles from Laramie City, and there is no doubt but there are miles of gulches that can be worked with profit. The Sweetwater mining region is already famous, and known to be rich in the precious metals; The "Seminole" Mines 30 miles north of Fort Steele are rich in gold and silver, and are successfully worked. The "Last Chance" gold mines are placer mines situated at the head of Douglas Creek in the Medicine Bow Mountains, and are rich and pay well.

Near Rawlins there are extensive mines of red oxide of iron, which makes an excellent mineral paint. There are two mills

already in operation, manufacturing this paint, large quantities of which are shipped East. This article is also extensively used in Utah as a flux for reducing silver ore.

The coal and iron deposits are literally inexhaustible. There are mountains of these minerals awaiting development.

The extensive coal mines of the Rocky Mountain Coal & Iron Co., the Wyoming Coal Co., and one or two other companies are situated in the Bear River Valley about 2 miles north of Evanston on the U. P. R. R. The coal is of the finest quality, clear and bright, burning to ashes, and the vein is over 25 feet thick and inexhaustible.

The VanDyke, Hallville, and Excelsior mines are near Rock Springs, and the Carbon mines near Carbon station; in fact there is scarcely any portion of the Territory where coal has not been discovered.

Large deposits of iron ore are found in various portions of the Territory contiguous to coal. There is already known one immense mountain, perhaps one of the most extensive in the United States; it is larger than the celebrated Iron Mountain of Missouri, and is situated on the Chugwater river, about 40 miles north of Cheyenne, and 25 miles from Laramie City. There is a natural road bed from the U. P. R. R. to the mountain and a railroad could be built at a comparatively trifling expense. The ore is a black crystalline magnetic, yielding 68 per cent. of iron. The richness, of this ore, the inexhaustible supply that exists, and its proximity to the railroad, offer extraordinary inducements to capitalists, and there is no doubt but that this valuable, lavish gift of Nature will soon be realized and its treasures brought forth for the use of man.

There are also several valuable iron deposits in the Laramie range, on Sabille Creek and many other portions of the Territory. Hematite ores are found near Cheyenne, Laramie City and other points.

Several large deposits of plumbago have been discovered, some of which are being successfully worked. Soda is also found, and one deposit near Laramie City has proved valuable; arrangements are already perfected for the organization of a company which intends to engage in the manufacture of soda.

Petroleum has been discovered near Green River, Fort Bridger, Evanston, Red Buttes, and several other points. Inexhaustable quantities of oil bearing shale have been discovered near Green River, which yields over 30 gallons to the ton. The oil is of a superior quality and admirably adapted for the purposes of lubrication. There is a large body of pure sulphur near Evanston, which will certainly be utilized at no very distant day.

These are a few of the minerals and metals already discovered in Wyoming; the subject might be enlarged upon very readily, but perhaps enough has been said to prove that Wyoming is rich in mineral wealth, and the small developments made are but an index of what can and will be accomplished.

MINERAL AND HOT SPRINGS.

Counties rich in minerals generally abound in mineral and hot springs. Wyoming is no exception in this respect, as springs of this character are found in nearly every portion of the Territory. Many of them possess valuable medicinal properties. There are a great many sulphur and iron springs at Evanston, Redmont and other points on the railroad. The Bear River Valley, and the Wind River Valley contain numerous hot and mineral springs.

TIMBER.

The timber resources of Wyoming are very extensive. A stranger passing through the Territory on the line of the Union Pacific railroad would be liable to conclude that there is no timber in the Territory. But the immense amount of ties, wood, square timber, poles, posts, &c., seen along the road would convince him that there must be timber at no great distance from the railroad. In the Black Hills and the mountains, and at the heads of streams the timber grows in dense forests. That found in the mountains is principally pine, cedar, fir and hemlock. At the heads and on the borders of streams, cottonwood and quaking asp. There are several saw mills in operation, and a number of heavy firms are engaged in getting out ties, wood etc., for the government, the railroad company and for domestic use. The numerous streams furnish a cheap and easy mode of transportation to the railroad, and this branch of business already furnishes employment to a large number of men, and is rapidly increasing in extent and importance.

GAME, FISH,

NATURAL CURIOSITIES, SCENERY ETC.

No section of country on the American continent furnishes so prolific a field of study for the savant, or so fine a field for the sportsman and pleasure seeker, as Wyoming. The greatest naturalists and scholars, are, every summer, wandering over her plains and climbing her mountains, and Wyoming is fast becoming popular as a hunting and sporting ground.

To the huntsman, Wyoming is a very paradise. Game is abundant and of great variety. The elk, antelope, buffalo, black and white-tailed deer, grizzly and cinnamon bear, puma (mountain lion) wild-cat, lynx, Rocky Mountain sheep, etc., may be found; also grouse, partridges, wild duck and geese, jack-rabbits and common rabbits, and an infinite variety of small game, together with the beaver, mink, martin, and other valuable fur-bearing animals.

The streams abound in fish; in the small mountain streams a beautiful and palatable variety of the speckled trout is found, and the rivers and large creeks abound in various kinds of fish, and furnish fine sport and a liberal supply to the sportsman.

The Territory produces an infinite variety of precious stones and natural curiosities. To say nothing of the valuable stones which have been found, it abounds in the cheaper and more common gems so much in use as ornaments. The agate, topaz, jasper, chalcedonia, garnet, quartz crystal, and a host of similar varieties of beautiful stones are found in almost every portion of the Territory.

The natural curiosities are very extensive and of great variety. The petrifications, crystalizations, rock and other formations found in the Territory, are widely known and eagerly sought after.

The scenery of Wyoming Territory is beautiful and impressive, and presents a great deal of variety and grandeur. The mountain scenery is sublime and must be seen to be appreciated. The mountains of the various ranges are in plain sight from the railroad, and rear their lofty heads, presenting a constant change of scene; deep valleys and grand canons abound, and peculiar formations of rock present themselves, in the shape of profiles, battlements, castles and giants, causing the beholder to regard them with awe, and at times to wonder if he is not in an enchanted region. In the distance is dimly seen, through clouds, the hoary old peaks of the

mountains, covered both winter and summer with a snowy mantle and rising 12,000 feet above the level of the sea. There is in this territory, a great deal of scenery worthy the attention of the tourist and pleasure seeker.

MANUFACTURING.

Manufacturers must naturally flourish in a country like this. The very nature of things make manufactures a necessity. The vast coal and iron fields offer extraordinary inducements for the erection of rolling mills, furnaces and reduction works. The wool grown here is acknowledged as a superior article, and Wyoming will before many years be as universally and favorably known for woolen fabrics as California. The woolen goods of California are far superior to those manufactured in the East, and there is no doubt that Wyoming will produce goods equal to those of California. The large quantities of hides shipped from Wyoming at the present time indicates clearly that the manufacture of leather will soon be very extensively carried on, with certain profit. The manufacture of lumber is already carried on pretty extensively, and the good prices obtained will certainly induce many others to invest in this branch of manufacture. These are but a few of the varied and extensive manufactories that will start up in Wyoming. All that is needed is confidence in the country; just as soon as one or two manufactories are started, the future growth and prosperity of this branch of industry will be firmly established, as others will follow so rapidly that the people themselves will scarcely realize it.

WATER,

FACILITIES FOR WATER POWER, &C.

There is an abundance of water power in Wyoming, but as yet no attempt has been made to utilize it. The Laramie rivers, the North Platte, Green, Wind River, Big Horn, Tongue, Powder, and Cheyenne rivers and their tributaries, all furnish a sufficient volume of water for motive purposes. They all head high up in the mountains, and have considerable fall, thus affording excellent facilities for this purpose,

or for the purpose of irrigation. These advantages will doubtless be used, when the country settles up. All the mills in the Territory at present are run by steam power. But as it is much more expensive than water power, the matter of using the latter certainly commends itself as a matter of economy. This branch of industry presents a fine field for active, energetic men, and any one familiar with the business, would experience very little difficulty in operating a water power mill for any purpose required.

LARAMIE COUNTY.

Laramie county is the most eastern county in the Territory. It is about eighty miles wide, and about two hundred and eighty miles in length, from north to south. The eastern line borders on the State of Nebraska and Dakota; the southern on the Territory of Colorado; and the northern on the Territory of Montana. Nearly all of the county is well adapted for the purposes of agriculture and stock-raising.

A great many farms have been taken up, and stock raising is very extensively carried on. Thousands of acres are still unoccupied, awaiting culture and utilization. The best portion of this country is still closed to the white man, and embraces all that portion north of the North Platte river. But it is hoped that the obstacles will soon be removed, and this rich grazing, farming and mineral country, will be thrown open to the active farmer, the miner and the mechanic. This country is rich in mineral wealth; copper, silver, gold, iron and other minerals have been discovered. A company has been organized and is working a copper mine about twenty miles north of Cheyenne.

The valleys of Horse Creek, Chugwater river, Pole Creek, the Laramie river, and numerous other streams contain good lands, easily irrigated, and will produce fine crops, with a good market always at hand. Timber is found in abundance, within a convenient distance.

Numerous farms and stock ranches are already located on all the streams, and all who have engaged in these pursuits have been rewarded with success.

ALBANY COUNTY.

Albany is the next county west of Laramie county; its extent, general appearance and characteristics, are nearly the same as Laramie county. It offers many inducements to farmers, stock-growers, and all others seeking homes in the West.

Wyoming abounds in beautiful plains and valleys of greater or less extent. A description of one of these may be regarded as giving the general characteristics of all:

The Laramie Plains are situated in this county, and include the valley lying between the Black Hills and the Rocky Mountains. It has an average width of forty miles, and is a hundred miles in length, containing an area of some four thousand square miles—over two and a half million acres.

Through this valley runs the Big Laramie river, the Little Laramie, Rock Creek, Cooper Creek and Medicine Bow, all of them streams large enough to float down ties, timber, and lumber, and besides which there are scores of smaller streams and tributaries available for stock water and irrigating purposes, and there is scarcely an acre of land in the whole valley which cannot be easily and cheaply watered by irrigation.

The temperature is wonderfully even. The thermometer very seldom indicates higher than eighty degrees in the summer; and very few times in years has it gone as low as zero in the winter. There are not, probably, an average of ten days during any winter in this valley, that it does not thaw for several hours during the middle of the day.

The Laramie Plains abound in iron and coal in exhaustible quantities, besides an abundance of the finest building stone, including stratified sand and limestone, and large bodies of gypsum, of a fineness approaching alabaster. The mountains surrounding the Plains abound in lode and placer mines of gold, silver and copper.

As before remarked, every acre of this great valley is susceptible of a high state of cultivation, and probably will produce as great a yield per acre of roots, vegetables and cereals as any place on the continent. It is about as large in area as the whole land of Palestine, which, in its palmy days, supported such a vast population with their immense flocks and herds.

Timber for building, fencing, fuel, &c., is easily and cheaply procured from the surrounding hills and mountains. Land is now surveyed and in market, and ready for the hardy pioneers to come and possess themselves of homes, which, under their strong hands, will soon bud and blossom as the rose.

CARBON COUNTY.

This county is situated in the central portion of the Territory. The eastern portion of the county is well watered by the Medicine Bow river and its numerous tributaries. Carbon county is like all the others, a fine grazing country, abounding in the bunch and gramma grasses.

The lands through which these tributaries pass are unsurpassed as sheep ranges; good locations for ranches can easily be found in the foot hills. Pine timber is abundant near the sources of the streams. Thousands of railroad ties are made every year from this timber and are floated down the Medicine Bow river to the line of the railroad. Indications of extensive deposits of coal and iron are discernable all the way from Carbon to Fort Steele, on the Platte river.

From Fort Steele to the Colorado line south, a distance of seventy miles, the country is settled up more or less by stockmen.

There are good stock ranges and farming lands for a distance of 75 miles along the Medicine Bow creek in the eastern part of the county, and along Pass creek which empties into the North Platte river above Fort Steele. The North Platte river furnishes nearly two hundred miles of good land in this county, and the country all that distance abounds in good grass, which makes excellent hay. The valley of Snake river situated in the southwest corner of the county is also a fine agricultural country; this section will probably furnish all the grain and vegetables for the mining country around it, both in Wyoming and Colorado. The valleys of the Sweet Water river, and Sand Creek also contain a great deal of good land, and will afford good homes for several colonies. There are numerous springs along Sand Creek, and the creek itself is a clear, beautiful stream.

These are some of the principal streams along whose banks can be found good lands, plenty of water for irrigating purposes, and plenty of timber within easy distance. There are numerous small streams all through the county, principally tributaries of the streams already mentioned, whose valleys contain thousands of acres of good lands, well adapted to the purposes of agriculture and stock raising. All these valleys will produce fine crops of small grain, potatoes, beets, onions, cabbage and all kinds of vegetables.

The home market in this section will absorb all the produce that can be raised, and the farmer can always secure liberal

prices. The country is settling up very rapidly and numerous farms are already taken up along all the streams. The timber business is increasing very rapidly and at the present time furnishes employment to a large number of men.

But the resources of this county which are destined to attract the most attention are the valuable and inexhaustible mineral resources. Several well defined lodes bearing gold and silver have been discovered, and some of them have been worked sufficiently to prove that they are good. In the "Ferris" mines there are some fine silver-bearing lodes, which are being worked and developed preparatory to putting in smelting and reduction works.

The quartz from the "Seminole" mines is principally "gold bearing." There is one ten-stamp mill in operation at these mines, and the results are very favorable.

The "Ernest" Lode, the "Monmouth," the "Cameron," "Smith," and the "Mineral Hill Mining Co's." lodes are a few of the numerous gold and silver bearing lodes which have been opened and worked.

The coal resources of this county are very extensive; nearly the whole county is underlaid by a vast bed of coal. Several mines have been opened, and some of them have been worked very extensively. The Rocky Mountain Coal Co. has a mine near Separation, with a vein eight feet thick. The Union Pacific R. R. Co. has an extensive mine at Carbon, which is worked on a large scale. There are several small veins of coal near Rawlins; and some large ones near the "Seminole" mines, and on the banks of the North Platte river near St. Mary's station.

Good building stone is abundant, and is of an excellent quality. It quarries easily and dresses splendidly.

In short, this county possesses all the essential requisites needed to build up a populous and thriving community, and offers material advantages to all seeking homes in the West.

SWEETWATER COUNTY.

This is the next county west of Carbon, and contains valuable agricultural and mineral lands.

The ratification and approval of the treaty with the Shoshone Indians whereby the Popagie valleys were ceded to the United States, and thrown open to settlement, induced many settlers to locate there during the past season. There are

now about fifty ranches or farms taken up by actual settlers, and more locations are being made every day.

All the small grains, and vegetables of all kinds thrive and yield liberal returns. Wheat, oats and barley are the principal crops at present, and a home market is found for all that can be raised. The Government purchases all the grain offered for sale, and pays good prices, giving Eastern prices with cost of transportation added. Potatoes yield well and are of superior quality; they sell very readily in the mining towns at good prices. Cabbage, turnips, beets, carrots, parsnips, onions, etc., are raised easily and successfully; cucumbers, melons, tomatoes and egg plant mature well, and are of an excellent flavor. No attention has been paid as yet to the cultivation of orchards, but there is not the least doubt but that the apple, pear, peach, plum, and other varieties of fruit will thrive if properly managed. Raspberries, strawberries, currants, and others of a like nature grow wild and are found in large quantities.

Timber is found in sufficient quantity, and at a convenient distance from the agricultural regions to make it available for building, fencing, &c.

Stock-raising is a leading business in this county, as in all the others, and is rapidly increasing in importance. Several prominent residents have already engaged in this pursuit, and have brought from the East some of the finest blooded cattle that could be obtained; a general disposition is manifested to keep and raise improved stock.

Sheep-raising will also become an important business, and all who have engaged in it have had good success and have reaped large profits.

In addition to the valley of the Popagie and its tributaries already mentioned, there are numerous others in this county, which are well adapted for the purposes of agriculture, stock-raising &c. Among these are the valleys of the Green River, Sweetwater River, the two Sandys, and the numerous tributaries of these streams.

The amateur sportsman, and persons seeking health or relaxation from the cares of business, will find a great variety and abundance of sport. Game of all descriptions abounds, and the hunter has a large variety from which to choose. Buffalo, Elk, Bear, Black and White Tail Deer, Antelope, Beaver, Mink, Rabbits, Sage-Hen, Grouse, etc., are found. The streams are full of trout, large in size, and delicious in flavor. The lakes near the heads of the different forks of Green River contain countless numbers of the speckled beauties. These lakes can be reached in about two days' jonrney from South Pass City, and will well repay a visit, to those intent on sport or actuated by a desire to view the beauties of

nature. The largest of these lakes is about sixteen miles in length, from four to five in width, and one of the most beautiful sheets of water under the sun. A gentleman who has visited it says: "On one of my visits to this lake, being rather listlessly inclined, I threw myself on the bank and watched my companion fishing. In the course of from two and one-half to three hours he caught one hundred and thirty-five pounds of as fine trout as ever bent a rod." The adjacent mountains and forests are filled with game, which, as yet has been hunted but very little.

The water is delicious, the atmosphere is clear, pure and bracing, and all the surroundings are of such a nature as to induce one to give himself entirely to the enjoyment of the scene, and pass his time in delicious admiration. Were the beauty, grandeur, and attractive features of the quiet retreats in which this Territory abounds, known to health and pleasure seekers, many of them would doubtless spend their seasons of recreation in viewing these beauties of nature, and thus improve their mental faculties, and recruit their physical strength, sending them back to their countingrooms, stores, or parlors with renewed strength and vigor. Were they to ry this plan one season, they would make but short visits to the fashionable watering-places, where the nervous excitement induced by late hours, fashionable parties, champagne suppers, gambling and other fashionable amusements injure both body and mind, and after a few days or weeks of this so-called amusement they hurry back to the city impaired in body and mind, instead of being benefited.

From indications it would seem that the government intends to open up a wagon road to Montana, by way of the Yellowstone Park. In October, 1873, Capt. W. A. Jones of the United States engineers, with a corps of assistants, made a reconnoissance of the country about the head waters of the Snake, Green, Big Horn, Grey Bull, Clark Fork, and Yellowstone rivers. Capt. Jones made a comprehensive and elaborate report of his observations, which would prove both interesting and instructive to the reader, and it is to be regretted that space will not permit its publication in this pamphlet.

He found several practical routes for both railroads and wagon roads.

He says: "It is practicable to make a railroad or wagon road up the Wind River Valley and to Yellowstone Lake, substantially along our trail, which is well blazened through the timber. From Yellowstone Lake, by following the divide between Snake river and lake drainage to the westward, the valley of the Madison, near the Great Geyser Basin can be easily reached; the only serious obstruction being the heavy timber. The valley of the Madison can doubtless be followed

down to Fort Ellis, Bozeman, Gallatin, Helena and the principal cities of Montana. Or, from Yellowstone lake, the east bank of the lake and river might be followed as far as East Fork, and thence down the left bank to Fort Ellis and Bozeman, over the route now traveled, which is a wagon road now as far as the Great Hot Springs on Gardiner's river. By this route it would be about *four hundred* and *fifty* miles from Bryan, on the Union Pacific Railroad, to Fort Ellis. From Bryan the Sweetwater Stage Companies are now running stages to South Pass city, ninety-three miles. From South Pass, there is now a wagon road, which can be greatly improved, running to a point on Wind river, thirty miles beyond Camp Brown."

Capt. Jones gives a very flattering description of the country through which he passed; Sweetwater country is rich in minerals, and is already known as a gold region. The mining interests in this section of the country have been subjected to many serious drawbacks, among which may be mentioned the "salting" game, usually practiced by unscrupulous men in new mining communities, by which valueless mines are sold on false representations. The Indians were also very troublesome, and drove numbers from the country; but the men who have stuck to the country have by dint of hard labor proved that the country is rich; the recent treaty with the Indians will ensure safety to the miner, and the disreputable class has been cleaned out.

Confidence is being restored and new mines are being opened every year. There are now several mines being worked with very satisfactory results; among these are the "Buckeye," discovered in 1869; it is still controlled by the original discoverers, and has been worked continuously. From the proceeds of the mine a ten stamp mill has been purchased, and several dividends declared. The shaft is one hundred and eighty feet deep; the gold exists in the minutest form and is equally disseminated throughout the rock, which increases in richness as the shaft is sunk. The "Carabas," allowed to be an extension of the "Buckeye," is a rich mine, and has been worked with good success during the past season. There is a ten stamp mill, run by water-power, connected with this mine. It is expected that a full force of men will be kept steadily at work on this mine. The "Mary Ellen" mine has been worked this season by a party of miners, who claim to have averaged daily wages of ten dollars each. The "Duncan" is one of best that has been discovered, averaging fully six feet in thickness; it is easily worked, and is convenient to wood and water. The rock is soft and easily worked. The "Cariso," "Young America," "Alice Lawn," "Miners' Delight," "Hartly" mine and many others are good mines. Gold exists in this section of the country, in its simplest form, that of "free

gold," as it is termed, which can be reduced by simple and economical process, viz., ordinary crushing and amalgamating.

This section of country will soon command that attention to which it is entitled, and a bright and prosperous future undoubtedly awaits the country of Sweetwater.

UINTA COUNTY.

This county is the most western in the Territory, and is about seventy miles wide, by two hundred and eighty miles long. It is bounded on the south by Colorado and Utah, on the east by the county of Sweetwater, on the west by Utah, Idaho and Montana, and on the north by Montana. It was formed chiefly from Utah and partly from Idaho and Montana. At the time that Gen. A. S. Johnston's army arrived in 1867, there were numerous small settlements of Mormons in that portion of Utah, now known as Uinta county.

There was quite an extensive settlement of agriculturists in the vicinity of where Fort Bridger now stands, particularly on Henry's fork of Green river; they raised grain and vegetables in abundance, and hidden stores of wheat found eager consumers, if not purchasers, in the weary soldiery who had toiled over so many miles of a desolate, unknown country.

Judge W. A. Carter, the post trader, who has remained at Fort Bridger since that time, says that the wheat was fine in quality, and the yield abundant. But the settlers removed from the vicinity, shortly after the occupancy by the troops, and have never returned. Whether they removed from fear, or by order of the "Prophet" is not known.

The Bear river rises in Utah Territory, passing diagonally across the southeastern part of Uinta county; its course at Evanston is nearly north for a considerable distance, and down its valley were, and are strong and numerous settlements and villages, mostly Mormons, with Evanston as a sort of headquarters, being the most available outlet, south, east and west. The construction of the Union Pacific railroad gave quite an impetus to the settlement of the country—railroad ties and construction timber being the first and chief demand. For this and other uses the Uinta spur of the Wasatch mountains furnishes an almost illimitable supply; and although most of the timber is in Utah, the outlet for it is through Uinta county. The timber trade instead of diminishing with the completion of the road has vastly increased. Quite a number of sawmills are kept steadily at work getting out lumber. Salt

Lake City and vicinity depend largely on Uinta county for lumber, piles, posts, ties, bridge timber, etc.; and the Utah mines keep up a large and increasing demand for charcoal,—indeed charcoal is quite an important article of commerce to the county, and brings a large revenue to the railroad company. A large number of men are employed in this business.

At Hilliard, a new town a few miles east of Evanston, there is a flume—just completed—which is thirty-five miles long, and is used for the purpose of floating wood from the timber to the large charcoal kilns in operation at that place. It is said that five hundred cords per day can be floated down, so that during the summer months a vast quantity of wood can be accumulated for winter burning.

But the chief resource developed by the coming of the railroad, was the coal trade. The supply of coal is literally inexhaustible; it is found in various portions of the county. The mines that are most extensively worked at present, are at Almy, about three miles west from Evanston; but this industry has received a severe blow at the hands of the railroad company, whose policy at present, is to drive all coal out of market, except that taken from the company's mines. The tariff on coal has been raised, and the price of coal reduced by the company in such a manner, that the other companies cannot compete with them; as a natural result some of the best mines in the Territory are to-day closed and lying idle, and hundreds of men thrown out of employment. It is to be regretted that the company have seen fit to pursue such a policy, but it is hoped that this plan will soon be abandoned, and that the company will resume the generous and satisfactory course formerly pursued.

There are numerous splendid valleys, well watered, and finely situated, only waiting for the labor of man to make them "bloom and blossom as the rose." There are several large valleys which offer extraordinary inducements to settlers, and large colonies will experience but little difficulty in obtaining desirable locations; they will find it to their interest to examine some of these valleys before deciding upon a location. The many growing towns afford a home market for everything produced, the supply at present is totally inadequate and large quantities of vegetables, eggs, butter, &c., are imported from Utah and the East. The soil in this county is rich and will produce all kinds of vegetables, small grains and fruits.

Flax grows spontaneously and luxuriantly in many parts of the county, and there is no doubt but that it can be cultivated to advantage. The culture of flax would tend to the erection of paper mills and linen factories. One of the problems of the day is how to obtain a supply of material for the manufacture of paper. Nature has here furnished an article

in abundance; this subject is worthy of the consideration of capitalists.

A fine clay, suitable for the manufacture of fire-brick and pottery, is found in large quantities; it is too valuble an article to remain idle very long.

About ten miles east from Evanston are what are known as the Bear Creek oil wells. About five years ago considerable work was done on these wells, but the owners, having no capital, were obliged to suspend operations. Enough was done, however, to demonstrate the fact that extensive oil deposits exist, and the business will prove profitable as the oil is of excellent quality, and is highly recommended for lubricating purposes.

But little is known at present concerning the mineral resources of the county, as but a small amount of prospecting has been done; there can be no doubt, however, that this county is like her sister counties, rich in all kinds of minerals.

Stock raising will become a leading feature of this county. Throughout the whole county, so far as it has been opened, are numerous valleys, where countless tons of hay can be cut, and which are well watered by innumerable mountain streams and springs. The portion of the county now opened will alone furnish good grazing for more cattle, horses and sheep than can be accumulated in a decade of years. The amount of wool, hides, grain, &c., produced will lead to the establishment of manufactories, grist mills, and others, and the vast amount of water power now unheeded, will be utilized.

At the north end of Uinta county, and occupying almost its entire width, lies the "National Park," a region of remarkable wonders and natural attractions, and which when easily accessible will attract thousands of admiring tourists. A practical route for a railroad can be found along Bear Creek valley; crossing the divide at Soda Springs in Idaho it would be a direct and easy route to tap the Northern Pacific. This same road would eventually connect with the Lorennixt, Denver & Salt Lake railroad, and be the outlet for the settlements which are springing up in the beautiful valleys of the White, Yampah and Snake rivers of Western Colorado. By this means the park would be accessible from the east and southeast, the west and northwest.

Uinta county offers many advantages worthy of consideration by persons or colonies contemplating settlement in the West; among these advantages are a good soil, healthy climate, an abundance of water power, timber and stone for building and other purposes in abundance, large deposits of coal and other minerals, and communities rapidly increasing in wealth and population, which afford a ready market for produce.

RIVERS AND MOUNTAINS.

Wyoming comprises an extensive elevated region, traversed, in a general southeasterly and northwesterly course, by the main chain of the Rocky Mountains. The Wind River Range, in the northwestern part, is a portion of the Rocky Mountain system, and constitutes a part of the great national divide.

The highest culminating point in the Wind River Range is Fremont's Peak, which attains an altitude of 13,000 feet above the level of the sea. This peak constitutes the initial point of three grand water sheds: The Columbia flowing into the Pacific, after draining with its affluents, the western part of Wyoming, and portions of other Territories to the northwest. The Colorado of the West, that discharges its waters into the Gulf of California, after draining in its course Southern Wyoming and portions of Colorado and other Territories to the .south and west; and, lastly, the Missouri, which, with its large and numerous tributaries, after watering Northern and Eastern Wyoming, and the Territories and States on the southeast, east, and northeast, unites with the Mississippi on its course to the Gulf of Mexico.

All the streams west of the Wind River Range, including John Gray's and Gros Vintres Rivers, have their rise in that range, and unite with the Snake River in Idaho, in its westward course into Washington Territory where it joins the Columbia. Green River and its affluents in the southwestern part of the Territory, drain an area of 11,000,000 acres. One-fourth of the area of Wyoming is drained by the Yellowstone and its affluents, flowing northeast 400 miles into Montana and northwestern Dakota, where it unites with the Missouri. Wind River rises in the mountain range in the vicinity of Fremont's Peak, flows southeast 100 miles through the southern flank of the Big Horn Mountains, uniting with the Popagie near the 43d parallel, where it turns to the north and is known as the Big Horn River in its course to the Yellowstone, in Montana, to which it is quite an important feeder. The other principal affluents of the Big Horn in this Territory are Gray Bull River and Bad Water Creek. Powder River rises in the Big Horn Mountains, and, by its numerous branches, among which are the Little Powder, Salt Clear Fork, and Crazy Woman's Fork, drains a large area, underlaid with the soft, yielding rocks of the lignite tertiary, and empties into the Yellowstone in Montana. Tongue River also rises in the Big Horn Range; it is nearly 100 miles in length, and flows

into the Yellowstone. The Little Missouri drains a small extent of country in the northeastern portion of the Territory.

The Black Hills country, in the northeastern part of Wyoming, is drained by the North and South Forks of the Cheyenne River, which, after an eastward course of nearly 400 miles, unite with the Missouri about 60 miles above Fort Pierre, Dakota. The South Platte and its numerous tributaries drain the whole southeastern portion of Wyoming, including an area of 28,000 square miles.

The North Platte and its affluents drain the eastern and central portions of the Territory; its principal affluents in Wyoming are the Big Laramie, Little Laramie, Chugwater, Sweetwater, Medicine Bow, and Poison Spring Rivers, and Bear, Horse, Rawhide, and numerous other small creeks and branches.

The Big Laramie has its source in the North Park, in Colorado, and is about fifty yards wide and two feet deep.

The Little Laramie, coming from the Medicine Bow Mountains, flows through a synclinal valley, in places five miles in width.

The Chugwater, an affluent of the Laramie, is 100 miles in length, having its source in the Laramie Range. Sweetwater River has its source near South Pass, flows east over 200 miles along the base of the Sweetwater Mountains, and joins the North Platte near the foot of Independence Rock. Medicine Bow River rises in the Elkhorn Mountains, flows through a broad, beautiful valley, uniting with the North Platte about 40 miles north of Fort Stule. Poison Spring River rises between Rattlesnake Hills and Independence Rock, and unites with the North Platte at the foot of Red Butte, west of Fort Casper.

The waters of nearly every stream in Wyoming are pure, fresh and palatable, having their source in mountain springs supplied by the melting snow on the mountain ranges; nearly all of them abound in fish.

In approaching Wyoming from the east, the eye of the traveler falls first upon the Black Hills, which lie part in Dakota and part in northeastern Wyoming. They derive their name from the dark and gloomy appearance which this range presents in the distance. Geological surveys show that the Black Hills occupy an area about 100 miles long by 60 in width, or about 600 square miles, one-third of which is covered by heavy forests of pine timber.

The base of the Black Hills is 2,500 to 3,000 feet above sea level, while in some places its crests attain an altitude of 6,700 feet.

The other principal ranges are the Laramie Range lying southwest of the Black Hills and connected with them by a low anticlinal; the Big Horn Mountains occupy an area 180

miles long by 50 wide, a little north of the geographical centre of the Territory; the Wind River Mountains in the vicinity of the headwaters of Wind River; the Sweetwater Mountains extend east and west, north of the forty-second parallel of latitude, between the South Pass at the headwaters of the Big Sandy and the North Platte. The Rattlesnake Range lies northeast of the Sweetwater, while to the northwest between the Yellowstone and Big Horn Rivers, is the southern extension of the Snow Mountains from Montana. In the southern part of the Territory lies the Medicine Bow Mountains, whose highest peaks reach above the line of perpetual snow, and to the north are the Elk Mountains; and still further northward is Sheep Mountain. The Bishop, Queen's, and Horned Mountains are situated in the southern part of the Territory and are spurs of the Sierra Escalante in Colorado.

Many of the mountain slopes and foot hills produce bunch and buffalo grasses, occasionally with scattering pine, while higher upon the mountain side and on the summits of the lower ranges, excellent pine, spruce and hemlock timber abounds. The existence of these immense forests will wield an important influence in the development of the extensive deposits of mineral to be found in this Territory. The timber frequently attains large size, is straight and will produce an excellent quality of lumber and furnish good timber for mining and other purposes.

TOWNS OF WYOMING TERRITORY.

The principal towns are Cheyenne, Sherman, Laramie City, Carbon, Rawlins, Rock Springs, Green River, Evanston, South Pass and Atlantic City.

CHEYENNE.

Cheyenne, the seat of the Territorial Government, and the county seat of Laramie county, is situated on the line of the Union Pacific Railroad, 516 miles west of Omaha; it is the terminus of the Kansas Pacific R. R., and the point where that road forms a junction with the Union Pacific Railroad.

This town was founded in the summer of 1867. In the fall

and winter of 1867–8 the town grew very rapidly, the population being composed principally of the floating class usually found in towns on large railroads in course of construction. Cheyenne was the terminus of the Union Pacific R. R. during that winter. In the spring, when work was resumed and the railroad pushed farther west, this class naturally moved on with the road, seeking new fields of action. This exodus naturally reduced the population very materially, and the number of inhabitants dwindled down to about 1,500. From this period may be dated the check of the mushroom growth of Cheyenne, and the beginning of good, substantial improvements. Although Cheyenne has had many serious reverses, having suffered severely from numerous extensive conflagrations, and her progress retarded in other ways, still she has gone steadily forward. Each year furnishes additional evidence of the confidence manifested in her ultimate prosperity, and the number of elegant and costly stores, residences and public buildings erected every year by her citizens, are the best proofs of this fact. Cheyenne is the centre of a vast stock-raising country; large numbers of live and dressed cattle are annually shipped; the wool trade is rapidly increasing and thousands of pounds are shipped every season. Cheyenne is also an important and central point for the farmers in Northern Colorado and the surrounding country in Wyoming, as a ready market can always be found for all produce offered. All the supplies for the government posts in the northeastern portion of Wyoming are shipped via Cheyenne; also all supplies for the Indians at Red Cloud and Spotted Tail agencies.

Fort D. A. Russell, one of the largest military posts in the United States, is three miles north of the town; there is also a large depot for the distribution of Quartermasters and Subsistence stores, situated one and a half miles from the town. Fort Laramie is 90 miles from Cheyenne, almost due north. Fort Fetterman is 80 miles distant from Fort Laramie, in a northwesterly direction. The population at present is about 2,500.

Cheyenne contains a number of fine buildings, both public and private. Among these may be mentioned five churches, representing the Presbyterian, Methodist, Congregational, Episcopal and Roman Catholic denominations.

There is an excellent graded school, (public) which will compare favorably in every particular with schools of this class anywhere in the United States. The public school building is a fine two story brick, 36x50 feet and cost about $13,000.

The court house is a neat, substantial brick building; it is two stories high, with a Mansard roof. The sheriff's residence and the county jail are situated immediately in the rear of

the court house, and are all connected with it. The size of the entire building is 55x125 feet; cost, $35,000. A new city hall has just been completed; it is two stories, built of brick, 25x80 feet in size and cost about $11,000.

The railroad company has a fine, two story hotel, containing forty rooms. There are also several good hotels in the business portion of the town. The railroad company has an extensive roundhouse and machine shops; these buildings are stone, and built in the most substantial manner.

There is a National bank, and one private banking house.

The Masonic, Odd Fellows, and other secret and benevolent societies have fine rooms.

Business is in a healthy and thriving condition, and few merchants have a better standing than those of Cheyenne. The city has a good natural position and is certain to control a large and extensive business.

The surrounding country is settling up with wonderful rapidity, and the success achieved by those who have already invested in Cheyenne and its vicinity is inducing many to cast their fortunes here.

The country in and around the "Black Hills" will undoubtedly attract attention next spring, and hundreds, yes thousands of hardy adventurers will go there in search of precious minerals. That this country is rich seems to be settled beyond a doubt.

By consulting any reliable map, the reader will at once perceive that Cheyenne possesses decided advantages in regard to distance and accessibility. Persons coming from the east, west or south, can reach Cheyenne by rail. They will then be within two hundred miles of the mines; the distance from Cheyenne to that portion of the Black Hills, which will be most sought, is about two hundred and thirty miles, by way of Fort Laramie, and Red Cloud Agency. The distance is about twenty-five miles less by going to Red Cloud Agency, direct. These routes are open all the year round, and the road is good, with an abundance of wood, water and grass.

The country is settled up all the way to these posts, and numerous trains hauling supplies to the military posts at Fort Laramie, Red Cloud, and Spotted Tail are constantly passing over the road, thus affording protection along the route, and an opportunity to purchase supplies, if needed. The posts at Fort Laramie and Red Cloud Agency will afford military protection; Red Cloud being only about fifty miles distant.

There is at present a weekly mail between Cheyenne and Spotted Tail, Fort Laramie and Red Cloud; it will be an easy matter to open this route fifty miles further, giving the miners their mail right in camp.

All the necessary equipments for outfitting parties of emigrants, hunters, miners and others, can be purchased in

Cheyenne at reasonable rates. All animals, wagons, &c., needed can also be obtained very reasonably.

Allusion has been made merely to those advantages, which persons at a distance will be anxious to know. The question of distance is settled by reference to the map; but a knowledge of the peculiarities of the route, and information of a like nature can only be obtained through inquiry. It has been our aim to give, at this time, such information as parties contemplating a trip to the Black Hills would be desirous of knowing.

While it is not our intention to disparage, or detract from the inducements and advantages claimed by other points, still in justice to parties intending to go to the Black Hills, it must be said that many of the claims put forth are hardly worthy of consideration. The maps decide the question of distance, so it will not be necessary to touch on that point.

The route via Bismarck is longer than via Cheyenne, and is impracticable except for a large outfit. Parties coming from the east will have to make a large detour to reach Bismarck, and when they get there will be farther from the mines, than if they had come direct to Cheyenne.

The press of Sioux City claim great advantages for that point; from Sioux City the distance to be traveled by wagon is nearly 600 miles, a great portion of the route being through a country infested by bands of hostile Indians.

Another route recommended is by way of Fort Randall; the distance by this route is farther than the Cheyenne route, with the additional difficulty of traveling over an inferior road. This route is totally impracticable during the winter, as the Missouri river is closed for several months, and the road itself rendered at times impassable by reason of deep snow.

The mines can be reached from Cheyenne in from six to ten days, while by any of the other routes it will take nearly a month.

There are two daily papers published in Cheyenne—the *Cheyenne Leader* and the *News*, also one weekly paper, the *Leader*, and a monthly, the *Wyoming Monthly Souvenir*.

SHERMAN.

Sherman, the highest railroad point in the world, is situated on the line of the Union Pacific Railroad, 32 miles west of Cheyenne. It is 8,232 feet above the level of the sea. This

place is already a favorite resort for health and pleasure seekers, during the summer and fall. There is plenty of game in the vicinity, and the streams are full of beautiful speckled trout.

The scenery is wild and picturesque, and the atmosphere clear and bracing.

Dale Creek Bridge, already so well known to tourists, is about three miles west of Sherman. The U. P. R. R. Co. has a roundhouse at Sherman, for the housing and care of engines used to help trains over the heavy grade of the Black Hills.

TIE SIDING.

This is a new town, and was started during the past year. It is an extensive shipping point for railroad ties, telegra ph and fence poles and timber of every description. It contains at present about ten or twelve buildings. The railroad company has erected station buildings and established a telegraph office within the last few months.

LARAMIE CITY.

This thriving city is situated on the line of the Union Pacific Railroad, 572 miles west of Omaha, and near the southern extremity of the vast plateau from which it derives its name.

The first building was erected in 1868. It has five fine churches, representing the Methodist, Presbyterian, Baptist, Episcopal and Roman Catholic, all of which have settled pastors and regular services. It has a graded school; also a high school, the Wyoming Institute, in which a regular academic course is taught, including music, drawing, civil engineering, the languages and higher mathematics. It has a literary and library association, which holds regularly semi-monthly meetings for literary exercises, and has accumulated a library of a thousand or twelve hundred volumes of choice, standard literary and miscellaneous works.

The town is the end of a division on the Union Pacific railroad. Here are located extensive machine and car shops

which give employment to 200 or 300 men. The Laramie river, which runs through the town, brings fuel, building and fencing material from the inexhaustible timber store in the mountains. A spring brook which runs through the city, sends its branches through all the streets, beautifying them and promoting the growth of trees and shrubbery, which are already extensively cultivated. It has a fine court house, and a number of elegant business houses and residences. The various secret and benevolent institutions are well represented and have elegant and commodious places of meeting. The population is about 2,800.

The immense natural resources of the surrounding country are just beginning to be developed. Extensive rolling mills are now in course of erection, which will tend to increase the population very perceptibly, and enhance the prosperity of the town. The erection of these works is but a beginning, and manufactories and mills of every description will follow in rapid succession.

There is an abundance of water power, which can be readily utilized, and will prove of incalculable benefit in advancing the prosperity of the town. Good timber and stone for building purposes can be found within easy distance.

Many elegant stores and residences have been erected within the past two years; the buildings erected are nearly all of stone or brick.

Every branch of business is well represented, and all are in a healthy and flourishing condition. There are five or six large grocery houses, and several smaller ones; also a number of dry goods, hardware, furniture, crockery, boot and shoe, clothing, book, and other houses.

Discoveries of valuable mines are being made continually, and most of them are considered paying; some of the rock taken from mines discovered recently, has assayed very well, and is creating considerable excitement. Gulch mining will become an important and remunerative branch of industry. There are miles of gulch mines, in the vicinity of Laramie City, that from their richness, must attract attention, and the vicinity will swarm with industrious miners. The military post of Fort Sanders is situated three miles east of Laramie City.

Laramie City is one of the most promising towns in the West, and is destined to become a populous and prosperous city.

NEWSPAPERS.

There are two daily newspapers published at Laramie City,—the Laramie Daily *Sentinel* and the *Independent.*

MEDICINE BOW.

This place is 120 miles west of Cheyenne, and on the line of the Union Pacific R. R. at the point where the road crosses the Medicine Bow River. Large quantities of ties and other timber are floated down the river and shipped from this point. There is a postoffice, telegraph office, one first-class general store, and buildings for the storing of government freight. Large quantities of supplies are shipped from this point to the military posts north.

Medicine Bow has flattering prospects of becoming an important manufacturing town, as it is situated in the centre of a vast iron region, and is only 9 miles from the Carbon coal mines. The Medicine Bow River furnishes an abundance of water power.

CARBON.

Carbon is 138 miles west of Cheyenne, and is one of the great coaling stations on the Union Pacific R. R. Thousands of tons are mined annually, furnishing employment to a large number of men.

There are several good stores here, a church and school house and the usual number of residences; this is what may be termed a regular coal mining town. The buildings are of stone, and built in the most substantial manner.

RAWLINS.

This town is the county seat of Carbon county, and is on the line of the Union Pacific railroad, 190 miles west of Cheyenne. It is situated in a beautiful valley and is the centre of a rich mineral, farming and grazing country. The population is about six hundred. The town contains four good hotels, three first-class general stores, two telegraph offices, a court house, one public school house, two churches and a number of handsome private residences. There are two mills constantly in operation, manufacturing metallic paint, which is

acknowledged by the officers of the railroad and others who have used it, as a superior article, and one of the best fire and weather-proof paints known.

The roundhouse and shops of the Union Pacific R. R. Co. for the western division, are located here and furnish employment to two hundred men. Rawlins is also the terminus of a freight division. There are three established postal routes to different points, viz: to Dixon and the White River Indian Agency, 225 miles southwest; to Warm Springs, near the head waters of the Platte river; and to the Seminole and Ferris gold and silver mines, 40 miles north.

ROCK SPRINGS.

Rock Springs is 320 miles west of Cheyenne, and is an important coal-mining town. The Union Pacific R. R. Co. has extensive mines at this place and employ several hundred men. The vein is over 20 feet thick, it being intermingled with a few thin layers of slate, none of them however being over 5 inches in thickness. The roof of this mine is fire clay.

The mines of the "Excelsior" company are situated about 400 yards from the station. Side tracks have been put in, so that the cars are run to the mine. This vein is 10 feet thick, and literally inexhaustible; the coal is considered the best mined in Wyoming Territory; it is used by blacksmiths, and also for the manufacture of gas and for the reduction of ores. It has been ascertained that a superior quality of coke can be made from this coal, which fact alone proves that this coal mine is a fortune in itself. The following is an extract from a letter written by Hon. E. P. Snow, President of the company, to the Surveyor-General of the Territory:

The analysis of this coal, as given by Prof. E. T. Cox, State Geologist of Indiana, is as follows: Specific gravity, 1.257; weight of a cubic foot, 78.37 pounds; coke, 54.40; volatile matter, 45.60; ash, white, 0.50; fixed carbon, 53.90; water, 7.50; gas, 38.10.

The Van Dyke and Hallville mines are also in the vicinity of Carbon.

The town contains several good stores, a church, school house and numerous residences. Nearly all the buildings are of stone, and are built in a neat, substantial manner. The population is about 600.

GREEN RIVER CITY.

Green River City is the county seat of Sweetwater county, and is 329 miles west of Cheyenne. It is situated on the banks of Green River, from which it derives its name, and is the end of a division of the Union Pacific railroad. The company have extensive shops here, and employ quite a number of men. It is also a central point for the stockmen, ranchmen, miners and others from the valley of Green River, and they do most of their trading here.

The population is from 500 to 600. Inexhaustible quantities of oil bearing shale are found in this vicinity, which it has been shown by analysis yields 40 gallons to the ton. The oil is of a good quality, and well adapted for lubricating purposes.

BRYAN.

Bryan is near the extreme western boundary of Sweetwater county, 344 miles west of Cheyenne. All the freight for the Sweetwater Mining District, and the supplies for the military posts at camps Stambaugh and Brown are transferred at Bryan. There is a stage line from this point to the Mining District and posts, and the stages and mail leave and arrive tri-weekly.

SOUTH PASS, ATLANTIC AND HAMILTON CITIES.

Leaving Bryan and traveling northeast for a distance of one hundred miles we reach South Pass City, situated in the Sweetwater mining region. The population in 1869 exceeded 2,000; but Indian troubles and other influences reduced the number materially. Gold mining is at present the leading interest of the place, and it is hoped that the recent satisfactory treaty with the Indians will have a tendency to remove a serious obstacle.

Atlantic City is four miles from South Pass City, and the circumstances of its career are about the same as the latter.

It is situated in the very heart of the mining country, and will become a prosperous town as soon as mining is resumed on the extensive scale which the richness of the country will warrant.

Hamilton City is the outlying mining town, and the surrounding country is rich in precious metals. It has suffered the same fate as its sister towns, but judging from the extensive preparations being made to press work next season, there is a probability that the former prosperity will return.

Camp Stambaugh, a military post located by Gen. James A. Brisbin in 1869, is situated at the apex of an angle, of which Atlantic City and Miners' Delight, or rather a line drawn between them, would form the base. The post was established for the protection of the citizens of these places.

Camp Brown is located on Wind River; it is 45 miles from Stambaugh. The post was established in 1871, for the better protection of the settlers in the vicinity and also the Indian Agency situated near it.

HILLIARD.

This town, scarcely three years old, is a remarkable evidence of what western energy and enterprise can accomplish.

Buildings have sprung up rapidly, stores of various kinds are doing a thriving business, and the town seems active and prosperous. The population is about 500, composed principally of timber men. A number of charcoal kilns have been erected, and large quantities of charcoal are shipped to Utah for use in the reduction works.

A flume 35 miles long, and terminating at this point, has been completed during the past season, and is used for floating wood, etc., from the timber to the line of the railroad.

EVANSTON.

Evanston, the county seat of Uinta county, is situated near the western boundary of Wyoming Territory. It is located in the famous Bear River valley, and is destined to become the commercial metropolis of that flourishing section of the Territory.

Although Evanston is but four years old, it is much larger than many eastern towns four times that age. It has three good churches, a public graded school, a bank, good commodious hotels and many fine private residences. A neat brick court house and jail was erected during the past year.

All the secret and benevolent societies have flourishing lodges and good halls.

Many good, substantial buildings of brick and stone have been erected during the past year. Nearly all branches of mercantile business are represented here, and some of the merchants carry very large stocks.

Evanston is the end of a freight division on the Union Pacific Railroad, and is the headquarters of the western division. The railroad company have here the most extensive machine shops, car shops, repair shops and roundhouse on the line of the road, outside of Omaha, and a large force of men is employed.

The *Evanston Age* is published daily and weekly.

Among the permanent resources of Evanston are the inexhaustible coal mines, which are being extensively worked, giving employment to about a thousand men. It also has the trade of the inhabitants of Bear River valley for a hundred miles in extent. It furnishes the largest quantity and best quality of lumber manufactured at any point on the Union Pacific railroad. It is in the immediate vicinity of rich mines of all kinds of valuable minerals, from coal and iron, to gold and silver.

As a place of resort for tourists, pleasure seekers and invalids, Evanston has no superior in the West. The scenery is grand, and the geological and mineral formations curious and interesting. Bear river, which runs right through the town, abounds in the finest salmon trout, and the surrounding mountains are full of all kinds of game, from gophers to grizzly bears.

INDUCEMENTS FOR IMMIGRATION.

It has been the intention, in this brief resume of Wyoming, to give a few plain, undeniable facts in regard to the resources and advantages possessed, and the inducements offerred to persons seeking homes in the West. Wyoming certainly has many claims which recommend her advantages to serious consideration by such persons. It will be impossible to direct attention to all her resources and advantages

by enumerating and treating upon them, but we merely point out some of the most prominent inducements. Among these are:

First. A climate of medium temperature, and an atmosphere remarkable for its purity and freedom from damp and miasmatic gases.

Second. A great variety of soil, presenting remarkable facilities for agriculture and stock raising.

Third. An inexhaustible supply of mineral wealth, presenting to man vast stores of coal, iron, copper, gold, silver, cinnabar, lead, plumbago, and other minerals and metals, and an endless variety of precious stones, waiting for bone and muscle to develop them.

Fourth. The extensive timber resources which exist, and which will be drawn upon to supply an increasing demand for this product.

Fifth. Topographical features, presenting an endless variety of grand scenery, which will soon make Wyoming a favorite resort for the tourist and scientist.

Sixth. Geological formations, which are the wonder and admiration of the geologist, and which are already attracting a great deal of attention.

There are to-day thousands of industrious, frugal people in the crowded communities of the East, who barely make a livelihood, and find it almost impossible to lay up anything for cases of emergency.

The numerous valleys of Wyoming, offer to the farmer a chance to secure a comfortable home for himself and family, and by good management and ordinary economy he will become well-to-do in a comparatively short time.

Colonies will experience but little difficulty in finding desirable locations; by settling in colonies mutual protection and assistance are insured, a settled plan of action quickly decided upon, expenses are lightened, progress is more rapid, and many other perceptible advantages accrue, and a prosperous community is soon established.

The Territory is out of debt and money in the treasury; the value of the assessed property in the Territory for the year 1873, is $7,021,941.98. The actual value of the property, is of course, much beyond that amount. The assessment for Territorial purposes in that year, was but three mills on the dollar.

Good schools are found in every town of any importance, the facilities for education are far superior to those of many older and wealthier communities, and no better can be found anywhere.

APPENDIX.

FACILITIES FOR OBTAINING HOMES IN WYOMING.

SYNOPSIS OF THE LAWS CONCERNING PUBLIC LANDS.

There are three classes of lands in this Territory. The first of these are the lands outside of the railroad limits. By Act of Congress the odd numbered sections for a distance of 20 miles on both sides of the line of the Union Pacific Railroad are granted to the company. The lands outside of these limits are what are known as minimum lands and can be pre-empted, taken up under the Homestead Law or purchased. The price of these lands is $1.25 per acre. Lands within the even numbered sections inside the railroad limits, are desigted as double minimum, and the price is $2.50 per acre; they can be obtained in the same way as those outside, but no person except soldiers who served during the late war can homestead more than 80 acres, within the limits. The railroad company has not as yet obtained titles to any of their lands in this Territory, but they will doubtless receive patents for a portion of them very soon. The company have offered liberal inducements to settlers to take up lands in Nebraska, and they will probably be as generous when they put their Wyoming lands into market.

In the meantime, persons living on railroad lands are allowed to remain, and those desiring to go on them have that privilege, but it is expected that they will purchase the lands when they are put into market. The company gives the person occupying any tract of their lands the first chance to buy if he desires to do so.

All surveyed Government lands are open to actual settlers. Title may be obtained by cash purchases, locating with warrants or agricultural college scrip, or under the pre-emption and homestead laws. Settlements may be made upon unsurveyed lands, but settlers must enter their claims within three months after survey.

PRE-EMPTIONS.

These may be made under the general pre-emption laws of the United States, upon "offered" and "unoffered" lands, and upon any of the unsurveyed lands belonging to the United States, to which the Indian title has been extinguished, although in the case of unsurveyed lands no definite proceedings can be had as to the completion of the title, until after the surveys have been made, and filed in the district land office. As there are no "offered" lands in this Territory, it will not be necessary to treat of them at this time. Where the land which the settler desires to take up, has been surveyed and *not* offered at public sale the claimant must file his declaratory statement with the district land office within three months from date of settlement, and make proof and payment within thirty months after the expiration of the three months allowed for filing his declaratory notice. Where settlements are made on unsurveyed lands, settlers are required to file or enter their claim, within three months after the date of the receipt at the district land office, of the approved plat of the township embracing their claim. The cost of filing a declaratory notice is $3.00, which is all the expense incurred in getting out papers until the claimant pays for the land. Every person the head of a family, or widow, or single man over the age of twenty-one years, and being a citizen of the United States, or having filed his declaration of intention to become a citizen as required by the naturalization laws, is entitled to the benefits of the pre-emption law. Any person of foreign birth may file his declaration immediately after his arrival in this country.

HOMESTEADS.

A homestead is a farm given away by the United States Government to the settler, providing he lives upon and cultivates his farm for five years.

A person wishing to enter a homestead, should make application to the United States Land Office of the district in which the land he desires, is located. The officers will furnish him with necessary blanks upon which to make his application and affidavit. A fee of $16.00 is charged to cover the expense of surveying and entering the land. At the expiration of five years, or within two years thereafter, he must appear in person at the Land Office, or in case of his death, his heirs must appear and comply with the requirements of the law. He then pays $6.00 additional fee, and will receive

a patent or complete title to the land. In case he does not desire to live upon the land five years, he is allowed by law, to pay for his tract with cash or warrants or agricultural college scrip, upon making proof of settlement and cultivation for a period of not less than six months from the date of entry to time of payment.

SOLDIERS' HOMESTEADS.

By the amended acts of July 1870, and June 1872, any person who served for not less than ninety days in the army or navy of the United States during the recent rebellion, and who was honorably discharged, and has remained loyal, is entitled to enter one hundred and sixty acres of the public land, including the alternate reserved sections within the railroad limits. This entry may be made at the time the person settles upon the claim, or he may file a declaration to the effect that he claims a specified tract of land as his homestead. His declaration may be filed through an agent, or by himself. Within six months he is required to make a homestead entry of the tract, and commence cultivation and settlement.

The time served in the army, or the whole term of enlistment, (if he was discharged on account of wounds or disability,) is deducted from the five years he is required by law to reside on the same.

A soldier must, however, reside upon, cultivate and improve his farm at least one year, before he can obtain a title.

A soldier who has heretofore taken a homestead of less than 160 acres is allowed to enter so much land contiguous to the tract embraced in his first entry, as when added to the quantity previously entered, shall not exceed 160 acres.

Colonies desiring to settle on unsurveyed lands, can have them surveyed on making application to the Commissioner of the General Land Office at Washington, D. C.

INFORMATION, &c.

By an act of the last legislature of Wyoming, a Territorial Board of Immigration was established, which Board consists of the Governor of the Territory, the chairman of the board of county commissioners of each county, and a Commissioner of Immigration who is also Secretary of the Board.

The Commissioner will furnish all information desired concerning locations, rates of fare and freight, distances, etc., and render all the assistance in his power to persons seeking information concerning the Territory and its resources.

The Board of Immigration at present consists of :

Gov. J. A. CAMPBELL, President.
M. E. POST, Laramie County.
L. ABRAMS, Albany County.
P. L. SMITH, Carbon County.
JAS. KIME, Sweetwater County.
WM. McDONALD, Uinta County.

J. K. JEFFREY, Commissioner of Immigration and Secretary of the Board, P. O. address, Cheyenne, Wyoming Territory, Lock Box 546.

The following letters taken from the *London Field*, are from the graphic pen of Mr. E. A. Curley, one of the special correspondents of that paper in America; they will prove both interesting and instructive, as well as truthful, Mr. Curley having traveled over the country in person. He has visited Wyoming for two seasons, and is well acquainted with the Great West.

TRAVEL AND EMIGRATION.

EMIGRANT FIELDS OF NORTH AMERICA.

WYOMING TERRITORY, AUG. 15.

I arrived at Cheyenne, the capital of this territory, on July 22, and found the decidedly cool weather an agreeable contrast to that which I had felt almost continuously since my landing in Boston six weeks before. I recollect having travelled in the focus of a drenching rain in Somerset, Devon, and Cornwall. It generally arrived at my various stopping places one or two days before me, got everything ready for my coming, and then fairly washed me out of the place. It probably spared the poor inhabitants in a day or two, having more important interests to serve at my next unfortunate place of refuge. Thus the people of each locality might get a rather tough storm of four or five days, but I got it in the worst shape for a fortnight. It is possible that in my present journey westward, reaching almost every locality in a "heated term," as it is called, my experience of the summer has been considerably warmer than the actual average fact. If so, I am now making myself amends by a sojourn in one of the most delightful of summer climates. Southern Wyoming, the only part safely accessible at present without an escort of cavalry, stretches about 360 miles east and west, and its general altitude is considerably over a mile. This elevation, and its situation with regard to mountains and air currents, gives it a pure, dry, light atmosphere, extremely exhilerating in its effects. The midday heat is sometimes a trifle extreme, but most people can avoid it, and it brings into stronger relief the pleasant mornings and evenings, and the cosy, comfortable nights under the blankets. It also has its due share in producing the magnificent sunrises and sunsets which are the rule on these mountain plains; for the warm, dry air takes every particle of moisture, to be partially condensed, as evening with its cool temperature approaches, and producing the fleecy, many-colored clouds which, from Orient to Occident, cover with their changing beauty one-half of the visible heavens.

By favor of Mr. Ecoffey, a trader, contractor, and rancheman of considerable prominence, I left Cheyenne on July 27 for Fort Laramie, about 100 miles to the northward. The road is dotted with ranches, at nearly all of which refreshments are kept, and rough accommodation afforded to travellers, for hire. We had a good, hearty supper at Fagan's rancho, about twenty-five miles out, the owner of which has an irrigated field of vegetables, from which we were treated to the finest potatoes that I have tasted for many a day. Ten miles further we stopped for the night, having an Indian squaw for our hostess, and the accommodation being of the rudest kind known to civilization. An early morning start brought us in view of the Chugwater about ten o'clock. As we looked down upon the valley from the bluff, it seemed about half a mile wide and bounded on the other side by an elevated aqueduct, perfectly level, and of large and regular proportions; while in the valley were large detached rocks, bearing a rude resemblance to some ancient ruin. Instead of half a mile, we found the valley some four miles across, and of course the opposite bluff, the aqueduct of my imagination was proportionately a more grand and lofty work than I had supposed. Nestled near the stream, in a capital location, is Kelly's rancho, devoted to cattle. Kelly has good pole fences, a good milk house, barn, and sheds; but his dwelling is of the general rough-and-ready log-cabin order, and it will probably always continue so. He is a successful man, worth about £10,000, and probably the richest "ranchero" on the Chugwater. Above and below the ranches are frequent, and I think that almost every quarter section of land on the banks of the river is taken up, though few of the ranchemen could fully stock the range commanded by their water frontage.

The Chugwater is a stream some eighty miles or more in length, and the road to Fort Laramie follows it nearly thirty miles, for which distance the valley is a wide deep cut in the soft sandstone deposit of an ancient lake. I should judge that the average height of the bluffs from the bed of the river is from 200 feet to 250 feet, of which 100 feet to 150 feet is often perpendicular, and cut out in grand and fantastic resemblance to mammoth works of human art—often carved with a wonderful amount of very curious elaboration. Castle Augur is a detached mass, a hundred feet or more in height, standing on a large pyramid of *debris*, and bearing, from many points of view, a most striking resemblance to an ancient castle, built of regular layers of hewn stone. But this object, large and striking as it is, sinks into insignificance in comparison with the titanic walls near by, with their bastions, pilasters, square projections, and numerous regular forms of irregularity, such as a skilful architect might use to break the monotony of gigantic dimensions. The walls ap-

proach a right angle at Castle Augur, where they are most highly ornamented and best preserved, and from this point they stretch away for many miles on either side. Hunton's ranche, where we stopped for dinner, is in an excellent location, and gives a good view of these walls. While the rest of the party, to whom the sight was no novelty, were enjoying their *siesta* in the heat of the day, I was engaged for a couple of hours, with a good glass, in exploring every nook and cranny that was visible from the porch of the ranche. On the extreme right, six miles away, Castle Augur loomed up, the regular layers of stone distinctly visible; then a stretch of ornamented wall; then a gateway, where through my imaginary city had flowed a stream, along whose devious course, as far as the eye could penetrate, walls as lofty and perfect as the outer ones were ready to resist any invader who should try the stratagem by which fell the less mighty and less ancient Babylon of history. The walls then become for many miles a combination of earthwork and masonry, as lofty as ever; and far away, six or seven miles to the left, are the projecting bastions which seem to terminate this huge line of continuous fortifications. When we leave these walls we often find rocky eminences weathered in curious curvilinear forms, such as would delight the eye of a true artist. The rock which exists in the rectangular forms that I have already attempted to describe was undoubtedly deposited in very still waters, and in a measure crystalized in hardening; while the curvilinear forms are the result of deposit in agitated waters. Some of these scallops and wave lines project in flat masses of rock harder than the underlying strata; some of them run perpendicularly through the whole exposed surface; and some—in fact, the greater number—are deeply under-cut, also in curvilinear forms, the result of a regular gradation in the softness of the siliceous strata. The vasiform weatherings are very numerous, and in a variety of shapes and dimensions; they are often very elegant and beautiful, but none of them are of such huge size as to strike the beholder with awe.

After leaving the Chugwater, we come upon another series of gigantic walls situated in a deep valley, the first distant view of which reminded me very strongly of a picture of the walls of Delhi which I remembered to have seen; but a nearer view shows a loftiness of structure, and a degree of ornamentation, which throws the picture altogether into the shade. Near the top are numerous cavities of equal size, occurring at regular intervals, and which one might mistake for loop-holes for small arms or embrasures for cannon, according to his idea of distance. These cavities have been the homes of eagles and other birds of prey; hence the imaginative trappers have given these immense and most wonderful rocks the

name of Eagle's Nest—a name which gives no idea of the treat that is here in store for the curious traveller. At this Eagle's Nest the artist will be able to obtain at least a dozen architectural views, of a grandeur and magnificence which I have neither the space nor the command of words adequately to describe. There are very few suggestive names in these regions. The original name given to Castle Augur by the trappers was Chimney Rock; given without the slightest regard to dimensions. Chugwater is by no means a very fine name for a beautiful stream, and its Indian name, which means "the place where the buffaloes jumped off the lofty cliffs, and came to everlasting smash," though somewhat more suggestive, is unpronounceable in character and interminable in length. It reminds me of a lake somewhere in Maine. A tourist had unguardedly asked its name of his guide, and his ears were immediately smitten with a long flow of harsh syllables, which no mortal could stand. After holding his ears desperately for a considerable time, it is said that our unfortunate friend precipitately fled; but again approaching the spot where he had left his guide, he saw him in an attitude of grand declamation, a flash of triumph in his eye as he was approaching the end of the word at a hard gallop. Our hero was just on the point of running away for a second and last time, when he heard the welcome "agog," which serves to terminate the name of every down-east lake. E. A. C.

WYOMING TERRITORY, AUG. 22.

The word "fort," as applied to United States military posts in the neighborhood of the various Indian tribes is entirely a misnomer. There is sometimes a blockhouse, but other fortifications of any description there are none. It is assumed, and generally with good reason, that, however numerous the Indians may be, they will not venture into the open field to attack a few companies of soldiers. Even among the bitterly discontented Sioux, said to number 30,000, and to be about as well armed as the whites, two or three dozen soldiers at each agency are considered ample protection for the Indian agent, his family, and employes. Stealing horses is one of the principal virtues of an Indian, as stealing money, land, railroads, mines, etc., is a great virtue among some very prominent classes of whites. Unfortunately, it is not so easy to get clear with another man's horse as to steal a few million tons of silver quartz or to pocket a thousand miles of railroad: consequently the "poor Indian with untutored mind" has a

constant tendency to the abominable vice of being found out, from which arise a very great proportion of the Indian troubles of the border. The Indian agents of the Government and the authorized Indian agents are comparatively few in number, and they steal directly from the appropriations of the government for the Indians, and indirectly by way of unfair trade, more than ten times as much as would pay for all the property of whites stolen by Indians. This is well known —it is, in fact, perfectly notorious—but it isn't "found out." It has long been notorious that the Hon. Mr. P. sold his vote on an important occasion for 100,000 acres of land that did not belong to the bribers. Both bribers and bribed were therefore thieves. But P. still holds the land, what he has not sold of it; he also retains the numerous other good things that he got in the same way. He has made his "pile," and will keep it, and a very prominent position in his adopted State. He will never be "found out." Sometimes an Indian agent becomes too notorious, and must be "investigated." But the investigators are in the same boat, and of course he is never found out. One of the nearest "touches" that I know of in the case of a big thief was that of O. A., the head of that notorious Credit Mobilier gang. He was just a trifle too thin-skinned, and he came so near to being found out that he died of fright and chagrin; but his family kept the millions that he stole from the United States government through his fraudulent company. I could give a very interesting chapter on the public thieves of the United States, and sometimes my indignation is so stirred that I am disposed to give half a dozen chapters; but they would have little practical value for the emigrant, as I have in this correspondence discounted in advance this among other important burdens and disadvantages which affect the rising communities of the west. There are some indications that it has passed its culmination. It has been borne by this people as it would be by few others, because the general increase of wealth among the moderately economical has been so rapid that this drawback has been scarcely felt, and consequently the degree of organization necessary to meet and crush it is of very slow growth.

"Fort" Laramie is at the confluence of Laramie River with the North Platte. Its elevation is some 4,000 and odd feet, and the climate is considerably warmer than at Cheyenne. Irrigation is necessary both for cereals and root crops, but there is a large amount of fine valley land, which can be brought under cultivation at a very moderate expense. A dozen small farmers with £500 each could make themselves snug little fortunes in a very short time by settling here, irrigating, and raising vegetables, cereals, and fruit. The local market at the fort, the ranches, etc., would take at high prices all they could raise for quite a number of years. Other

settlers coming in would also require supplies for one year or more, and finally a railroad towards Montana now projected, or the opening of mines, or both, would come in to prevent a possible glut of the market. They would sell produce at three to four times the Nebraska prices for several years, and, although they would eventually have to come down to more ordinary profits, they could safely count upon recouping themselves for their land, irrigation works and fences, four or five times over by that time. Fences would be necessary, because, this being a cattle country, there is no herd law. The necessary irrigation works would be of the simplest character. There is abundance of water in both rivers. A ditch taken out a mile above the first irrigated farm would probably have fall enough, so that it could be carried behind each farm in succession. Smaller cross ditches would run from this to the river, and side ditches fed by these would supply the various fields, which would be cultivated in narrow lands, ridges, or furrows, having a gentle slope. When the water is let into a field, a man with a hoe guides it into each furrow in succession. A little experience makes one an adept in this simple art, and the labor of watering a field is really very little. Of course, high hills and steep slopes would require much more extensive and elaborate works; but these are cases which need not be considered at present, for our pioneers, and many after them in this region, would have very gently sloping valley land enough and to spare. One caution, however, is necessary; while a farmer, with a fair education and good judgment, could easily set out with the proper instruments such irrigation works as this, it will never do to go by guess. Suitable instruments must be used and a definite methodical plan pursued. The irrigation of bottom lands seems so very simple to some people who have seen it done that they sometimes try it without instruments, and in the end generally find themselves trying to persuade the unwilling water to run up hill. The main irrigating ditch might be made to serve as a fence on one side, and the river, with a little labor, on the other; while poles from the river side or the mountain, or slabs from the saw mill, would afford suitable division fences and the necessary small inclosures until willow hedges could be grown. This is a capital region for fruit. Wild cherries, wild currants, gooseberries, and grapes strike deeply into the soil, find sufficient moisture, and bear large quantities of fruit.

I judge that irrigation could be introduced somewhat extensively with advantage in the neighborhood of Cheyenne. The local market is a very considerable one, supplied almost entirely by rail from very long distances, at prices almost as high as those at Fort Laramie. The climate is colder, and I doubt whether fruits could be depended upon without great

care. The difficulties in the way of irrigation here are also much greater than there, but the average profits upon its skillful introduction for the raising of vegetables would, I think, be very large till production overtook the demand. But small farmers coming to any part of Wyoming should organize, and come in co-operating bands of half a dozen and upwards. A single farmer with £500 must have a very favorable location if he irrigates and cultivates a farm with such a profit as he ought to expect in this Territory. But half a dozen with £500 each, co-operating in a main irrigating ditch and in some of their more expensive implements, would find many localities in which they could handle their capital with greater advantage than in most parts of Kansas and Nebraska. A man with £400 would be nowhere in starting a sheep ranche; but ten men with their families, and £400 each, could use £1000 to start a very good flock, and with the other £3000 they could live the first year, and irrigate land enough to give them constant employment. Excepting at lambing and shearing time, the flock would require little more attention than a couple of boys could give, and the second year would see our colony with an excellent start. In all cases the co-operation should be limited to very necessary things, which could thus be handled much more cheaply than otherwise, and the terms of co-operation should be very clearly defined. Any loose, happy-go-lucky way of doing business would be sure to produce wrangles and other mischief of a very serious character.

E. A. C.

WYOMING, AUG. 29.

If twelve small farmers, with an average capital of £500, or, say, $2,700 currency, clear, on their arrival at Fort Laramie, should co-operate in irrigated farming, their proceedings might be something as follows:

First, the purchase, pre-empting or homesteading of, say, four and a half miles of river frontage on one of the streams in the neighborhood of the fort. For this purpose they would have to buy out some others. An outside price for this, with some small improvements, would be—

For a quarter of a mile, in average width, of good bottom, $5 per acre upland being thrown in, at which price the estate of 720 acres would cost	$3,600
With plows and scrapers, a suitable main ditch to irrigate 640 acres of this bottom land, and also to act almost wholly as a fence, could be constructed at a cost not exceeding	3,000
Side ditches	3,000
Breaking up the land	3 000
Cross ploughirg, harrowing, throwing into narrow lands, or into ridges, and thoroughly preparing for crops	3 000
	$15,600

This makes an average cost of less than $25 per acre for the 640 acres out of the 720, supposed to be capable of easy irrigation. When in this shape the planting and fair cultivation of the crops will not be very expensive. The returns, which could be calculated upon till the local market became glutted, would be:

For barley, 30 to 45 bushels per acre, $1.80c to $3 per bushel, or $54 to $135 per acre.
For oats, 30 to 50 bushels of 40lbs, at $1.20c to $2, or $36 to $100 per acre.
For potatoes, 125 to 200 bushels, of 60lbs, at 4c. to 8c. per lb, or $300 to $960.
For cabbages, turnips, onions, beets, and sundry vegetables, from one and a half times to twice the value of the yield of potatoes.
For strawberries and small fruit, 25c, to $1 per lb.

The reason for these extraordinary prices is found in the fact that these articles of consumption have now to be transported from five hundred to a thousand miles by land, a hundred miles of which at the Laramie end is by team. Of course the market, being small, is easily glutted, and our settlers, if desiring to make the most of their land, would have to calculate closely their acreage of each crop. It would be impossible to bring all the land under cultivation at once. I should make a great effort to utilize a portion of it for vegetables the first year. The best time to arrive would be in the early spring. A pioneer of cool judgment should go ahead and make preliminary arrangements; he should in fact be entrusted with the location and purchase of the land, the erection of temporary shelter, and the buying of such teams, implements, and supplies as would be wanted immediately on the arrival of his friends. All should be on hand as soon as the weather was suitable for ploughing and ditching in the spring. Sixty acres might be laid off for raising vegetables the first year. In breaking this care should be taken that the furrows run in the precise direction which the irrigating water is intended to follow. The outside furrow should be cut with a narrow breaking plow, and the next so cut that the sod will fall flat in the first furrow. A second plow follows in the second furrow, turning four inches depth more of the under earth over the sod, and making a clear cut furrow, flat at the bottom, and seven inches deep. The third sod, if carefully turned, will fall flat in the bottom of this furrow, to be covered like the second with a four inch slice of the under soil. The sod being thus thoroughly buried, the top soil may be harrowed, cross-plowed, raised in moderate ridges, or handled in any desirable way. I should say put upon it as much well rotted manure as can be got gratis and hauled from the fort; put the soil in thorough good shape, and put in some of your vegetables before commencing your main ditch. If the spring is too dry for this purpose, have sufficient extra help to get a ditch through sufficiently large and in time so that your crops shall not suffer.

I would roughly estimate this year's operations about as follows:

CAPITAL ACCOUNT.

720 acres of bottom land	$3 600
Temporary shelter, afterwards used for canals, fences, &c	1,000
60 pair of oxen, at $80 per pair	4,800
4 pair horses and mules	1,200
6 ponies	200
50 cows	2,500
1 bull	100
Wagons, plows, and various implements	5,000
	$18,400

EXPENSE ACCOUNT.

Twenty-four men, two months at $50 per month, including board	$2,400
Six ditto, three months at $45	810
Family expenses, one year, for twelve families averaging five persons, with a home supply of milk, butter, meat, and vegetables for most of the year	6,000
Sundries	1,000
	$10,210

RETURNS.

Say 20 acres of potatoes, a small yield of 100 bushels to the acre, at 5c per lb	$6,000
10 acres of sundry vegetables	4,000
20 acres oats at $40	800
10 acres swedes, &c., part sold at Fort (amount retained for home, cattle and sheep not estimated)	500
Butter sold at 50c., 2 lbs per cow, 25 weeks	1,250
Swine	1,000
	$13,550
Deduct expenses	10,210
Balance to profit	$3,340

Estimating that the whole of the capital account and one-half of the expense account is out of pocket before any considerable returns come in, we have.

Capital account	$18,400
Half expense account	5,105
Highest amount outstanding	$23,505

which, at $5.40 currency to the pound=£4353 nearly, leaving a balance in hand of $1647, which we will suppose expended in the course of the summer in building twelve concrete houses at £75 each (£900), and furnishing the same at £62 5s. each. The sum for the furniture is less adequate than that for the houses, for these would be constructed by the farmers themselves, who, if not quite able to understand the admirable instructions to that end which have appeared in *The Field*, could easily take lessons of some soldiers at the fort, who construct buildings in that manner. The composition

used there is 30 bushels gravel, 2 lime, and 1 hydraulic lime. They burn their own lime, and finish their own lumber, so that the expense out of pocket is by no means large. Wood for firing may be collected by all comers in the hills a few miles out, and timber in the mountains. Possibly the timber might be sawed into boards at the Government sawmill in the port; otherwise a horse or steam power sawmill would be quite a necessary implement. It would be necessary to haul some supplies from Cheyenne, 100 miles; and, if there were a surplus of any crop, a portion of it at least could be hauled there to advantage by the settlers themselves, or sent there cheaply by the numerous freight wagons returning empty. The difference in net returns of whatever should be sent to Cheyenne would probably be $1.50 per 100 pounds.

Supposing fair good fortune in selling crops, three-fourths of the first years returns, upwards of $10,000, should be available before Nov. 1. It would be easy to manage expenditure so that at this time $3000 should be available for buying sheep—1000 ewes and fifteen tups. Part of the lumber used for temporary shelter, and some other hauled from the mountains, would provide corrals and winter shelter for the sheep. Abundance of hay would be mowed on the bottom, of which, by the way, $1000 to $3000 net value might probably be easily saved, and sold at the fort; and there would be plenty of swedes and other vegetables, with some barley and oats, for fattening purposes. The use of current funds to buy some cattle for fattening and some mutton sheep should also add very substantially to the year's income. Merely alluding to these matters, and the heavy demand for hay at very high prices, as subjects well worthy of attention, we will leave the year's income as already estimated.

For the next year the main irrigating ditch is of course completed, and the area under cultivation is tripled. With this increase of area there is probably a decrease in the proportionate acreage of the most profitable crops, partly to compensate which the land cultivated last year yields more largely. As less than one fourth of the land would be under cultivation this year even, there would be an immense surplus of water, which would of course be guided to the uncultivated portion, by the systematic flooding of which a large yield of hay would be obtained for sale at the fort. It would be quite safe to double the returns for this year, while diminishing the running expenses by 25 to 33⅓ per cent., leaving the sheep out of the calculation.

As for the sheep, the actual money outlay for them, their sheds, hay, &c., has been $3000 where it could not well have been less than $5000 if they were owned by a single man devoting his whole time to them, and paying cash out of pocket for all assistance required. This flock comes in incidentally,

and two of the farmer's boys herd at a cost, say, $25 per month between them. There is hay in abundance, plenty of roots, and unlimited winter and summer pasture. The cash expenses out of pocket will not be 10 per cent. of the gross returns.

SHEEP ACCOUNT: SECOND YEAR.

Cost 1000 ewes and 15 tups	$3,000
Cash expenses 10 per cent. of returns	390
	$3,390

RETURNS.

9000 lbs wool, net 30c	$2,700
600 lambs, worth $2	1.200
	$3,900
Balance of second year's profit after paying for sheep	$510

The flock would soon admit of division, and in three or four years each farmer might have his separate flock and his farm entirely separate with advantage, co-operating then only in the water, the larger inclosures, some of the costly implements, and a few miscellaneous matters which could be best managed by that means. I have here confined myself to one point, Fort Laramie, as a matter of convenience; but the same general principles will apply in the vicinity of some other U. S. ports, and also of many mining camps in the country; and if men looking for such an opportunity as I have sketched should be disappointed by finding one location already taken, or not quite to answer their wishes, they should not be discouraged, but look around for others.

E. A. C.

WYOMING TERRITORY, SEPT. 5.

I have not the figures for accurate estimates of the profits of agriculture in the various localities in this territory, where it could certainly be introduced with heavy profits under judicious management. It will be readily understood that, as produce is brought almost entirely from Nebraska on the east, and Utah and California on the west, market prices will vary in every town with the cost of transportation. In some neighborhoods the necessary cost of irrigation will be much more than in others. In some, as at Fort Laramie, one could, under judicious management produce almost everything; in others, as at Cheyenne and Laramie City, one's efforts should

be confined almost exclusively to raising hardy vegetables and cereals. Those who would engage in agriculture to the best advantage should therefore study all the local circumstances with great care. Any intelligent, hard-working men, with very small capital, may come singly with safety to themselves and their money; but they must not waste time in looking round. Their only safe and profitable course is to hire out at monthly wages for the first season. By this means they will earn $30 to $40 per month with board, for six or eight months of the year, and very possibly for twelve; and at the same time they will be acquiring information which will be of solid advantage to them in the future. For the present, grazing is undoubtedly the great industry of the Territory, and the circumstances on which one can found his estimates of profit and loss are but slightly variable with localities, distance from market, and other matters which are very essential in the raising of crops.

In my letter in *The Field* of Jan. 31, 1874, I gave several estimates. I judged that it would be both interesting and profitable to compare the reality as developed this year with the estimates as then given. Each of the gentlemen who favored me then says that the results of the year's operations have been very good; but I have as yet details from but one, Mr. M. E. Post, who has a herd of Mexican sheep. The actual figures as to number of his herd, expenses, etc., are somewhat different from the estimate, but the result is rather more than the anticipated 60 per cent. profit. I visited his ranche, some twelve miles out from Cheyenne. I found it well situated, and the flock a thriving and very promising one. The Mexican sheep are undoubtedly much superior to the Merinos as mothers, and they are better travelers, and more capable of taking care of themselves on the plains. Their wool is small in quantity and coarse in fibre; but the majority of the first cross with Merino rams in Mr. Post's flock shows an enormous advance in this respect upon the original herd, and I think that careful management might develop a new strain, combining the good points both of the Mexican and the Merino. Undoubtedly the Mexican came originally of Merino parentage, and in the course of many generations it has developed some new and useful qualities, while in many other respects it has lost useful qualities of its ancestors. It is not far from the Merino in size, and it is said to make a much better quality of mutton. Mr. Post has Mexican herders, who have a great knack with the lasso. There are a certain number of "pauper" lambs. Instead of bringing these up by hand, ewes which have lost their lambs are caught with the lasso, and compelled to suckle them. After a while the foster-mother adopts the "pauper" with good will, and the trouble of catching may be dispensed with.

I subjoin the statement of

MR. M. E. POST'S SHEEP ACCOUNT, Dec. 1, 1873, to Aug. 1, 1874.

STOCK ACCOUNT.	DR.	
Dec. 1, 1650 wethers at $2	$ 3,300.00	
1550 ewes at $2.50	3,875.00	
22 Merino bucks	465.00	
Feb. 27, 203 wethers bought	366.75	
Horses, wagon, tools, etc	600.00	
Value of improvements cost	1,000.00	
		$9,606.75
Expense account, including shearing, lambing, marketing, wool labor, provisions, etc., Dec. 1 to Aug. 1	1,441.81	
40 tons hay at $8	320.00	
85 sheep lost during the winter at $2.50	212.50	
		1,974.31
		$11,581 06

RETURNS.	CR.	
1,800 fat wethers sold at $2.50	$ 4,500.00	
Wool sold	3,300.00	
85 sheep kelts at $1.25	106.25	
		$7,906.25

STOCK ACCOUNT.		
Aug,, 1874, 1,515 ewes on hand at $2.50	$ 3,757.50	
1 200 lambs, improved, at $3	3,600.00	
22 bucks	465.00	
Horses, wagon, tools, etc	60 .00	
Value of ranche improvements	1,000.00	
		9,452.50
		$17,358.75
Profits to balance		$5,777.62

[Of the 85 sheep lost during the winter 70 head were killed by accident, which could have been avoided.]

The total outlay is $11,581.06, and the total profit $5,777.69, which is just about 50 per cent. on the outlay. But the returns began coming in long before the whole outlay was incurred, and there was not $10,000 out of pocket at any one time, while the average outlay was certainly less than $8,000; therefore, by any reasonable calculation, the profit has been between 60 and 70 per cent.

But it is not always and everywhere, regardless of circumstances, that such profits are realized in sheep farming in this territory; in fact it is only very recently that people have acquired that experience which with care and attention will insure success. A late surveyor-general of the Territory, Dr. Latham, wrote and said a great deal upon sheep farming, with

such plausibility, although without adequate knowledge of the subject, that quite a number of young men came from the Eastern States and engaged in the business according to his recommendations, without providing food for winter storms or adequate shelter—things which they learned by sad experience were very necessary requirements. The winter of 1871–2 was a very severe one, and some of those who had followed Dr. Latham's advice made such serious losses, that it has taken them all the intervening time until now to pay running expenses, and to reach the standpoint from which they started. I subjoin in full the statement of Mr. T. W. Sargent, of the firm of Sargent & Horner, two young gentlemen from Boston, who started in accordance to this very learned doctor's advice. Mr. Sargent says:

I arrived at Laramie City in August 1871, and immediately set to work building corrals, etc. I was informed by residents of the place and parties interested in stock that no sheds or hay were needed, and, notwithstanding their advice, I purchased fifty tons of hay, which was distant from my ranche ten miles. My sheep, 2,100 in number, were to arrive by cars the 1st of September. I erected a comfortable log house for myself and men, a stable for horses, and corral 240 feet square; these comprised all my buildings. My sheep arrived all right from Iowa, with a loss of only 10 or 10½ per cent. About Oct. 13 snow commenced to fall, and continued to snow for four days without intermission; it then commenced to blow, and cleared the plains partially; but of course filled the ravines and valleys. I was frightened at the violence of the storm, and resolved to put up sheds. I sent two teams to the timber, and they had great difficulty in procuring poles, owing to the depths of snow which fell in the foot hills and could not blow away. This first storm was soon followed by others, and I found it impossible to get into the timber at all. I shoveled out my corral by day, to have it filled by the wind at night. I tried to save hay for my sheep, and found that also impossible. I could not haul over half a ton with six powerful horses. My sheep then commenced to die; actually starving to death, and I had no means of saving them. We had storms every two or three days till the middle of April. I lost during the winter all of my sheep. I was thoroughly disgusted with the business and the country, and made up my mind to give it up, but finally concluded to try again. I then purchased a fine ranche, that would cut 200 tons of hay, and I bought 1,000 ewes, and built a corral, with good sheds. I also purchased Cotswold rams, and saved an increase of 60 per cent. The first spring the sheep sheared 4½lbs. per head, and the wool brought 30 cents per pound. I figure the expense of buildings on a ranche as follows:

Corral for 2,000 sheep, with sheds	$ 1,000
Fencing 160 acres of hay land	1,000
Dwelling house	250
Stable	150
Teams, etc., to put up hay, including wagons	600
Mowing machine, rake, forks, etc	300
Total	$3 300

"The expense for running a ranche as follows:

Herder at $40 per month	$ 480
Fuel, grain, etc	150
Putting up hay, $4 per ton	400
Food and incidentals	700
Shearing sheep (extra)	200
Total	$1,930
Cost of 2,000 sheep at $3	6 000
Permanent improvements, implements, etc., as above	3,300
Total	$9,300

RETURNS.

Wool, 9,000 lbs, at 30c		$ 2,700
Lambs, 1,200 at $1*		1,200
Total		$3,900
Expenses, as above	$ 1,930	
Add interest at 6 per cent. on $9,300	558	
		2,488
First year's profit		$1,412

"This $1,412 is the profit of the first year. From this time I have of course the 1,200 lambs to work on. They will shear 4 lbs per head, or 4,800 lbs. The year following my lambs bring forth increase, and any mathematician can see clearly, by computing and compounding, that 60 per cent. on his original investment can be realized yearly. I consider that at the end of the first year the increase are really worth as much per head as the old sheep, and my experience has been that 60 per cent of the increase are ewes." E. A. C.

WYOMING TERRITORY, SEPT. 11.

I stopped at Wyoming Station, about eighteen miles from Laramie City, to see the dairy and cattle ranche of a well-known grazier, Mr. L. Fillmore. The number of dairy ranches in Wyoming is extremely limited, the calves being in

*$1 per head is certainly not mere than half the value of fair, first-class lambs, Cotswold or Merino grades.—E. A. C.

almost all cases allowed to run with the cows. Mr. Fillimore has about 2,000 Texan cattle and Texan grades, which are herded near the ranche, with superior bulls. These native cows are regularly milked. About sixty were in milk at the time of my visit. The quality produced is very rich, and the make of butter is excellent, bringing a higher price than that imported. It sells for 50 cents per pound, by contract, the year round. The value of pasture is accurately represented by the cost of herding the cattle; these cows being kept near the ranche must be fed with hay in the winter, and the cost of hay is simply that of cutting, curing, stacking, etc. It has to be herded while growing, that is, protected from the grazing of the cattle; but as the cattle must be herded in any event, there can be no very heavy addition in cost from this fact. It is sometimes fenced, the fencing being worth, when put up, about $1 per rod, and the fields being, of course, very large, so that the cost, when distributed, is but a trifle per acre. I have not Mr. Fillimore's figures before me, but it is clear that, under these circumstances, a very moderate return in the number of pounds of butter sold will cover the running expenses and yield a splendid profit on the average value of the cows at $50 each, with two thoroughbred bulls $500 each. In addition, the progeny of the cows ought to be worth —the heifers, $50 each at two years old, and the bulls the same price when yearlings, being quite equal in quality to the average of those imported from the States at that figure to run with the Texan cows. Mr. Fillimore drove out with me to show me his native cattle, his mares and colts, and such of his Texan cattle as were within reasonable driving distance. The Texan half-breeds were much superior to their mothers, and the herd, as far as I saw it, was of fine average quality; the situation of the ranche is a most excellent one; there is an abundance of bottom land for meadow, and an unoccupied stretch of good grazing land for many miles down the Laramie, so that Mr. F. has abundant room for the increase of his herds. He has promised to give me his profit-and-loss account, which I think will be interesting to the readers of *The Field*. In the course of my drive of two hours around Mr. F.'s ranche I saw four flocks of wild geese, the largest of which numbered upwards of thirty, and stood with the utmost *nonchalance* on one bank of the river while we drove at a few rods' distance near the other bank and counted them.

From Laramie county Capt. Coates kindly drove with me to Fort Saunders, where we partook of the kind hospitality of Major Powells, and then proceeded to Capt. Coates and Mr. Rumsey's ranche near the Red Butes station. This station is so called from a number of singular prominences of a deep red color in its neighborhood, which are the remains of

earth and rock strata the deposit of ages, and which, excepting these few Butes, have been entirely swept away by ice and flood. For anyone stopping at Laramie City, and having time to spare, they are well worth a visit. I found Coates and Rumsey's ranche well appointed in its conveniences for their sheep and cattle. They intend to go into the dairy business to a moderate extent, but they are at present devoted almost exclusively to sheep, of which they have a very fair flock. As their sheep have been entrusted to others who have not always had the interests of the owners in view, nor been adequately overlooked, their profits have not been as good as those of some other flockmasters that I have met; but I trust that, with more care from the owners, or with better help, they will soon obtain as large increase and as heavy profits as any of their neighbors.

On arising very early in the morning I saw some hand-reared lambs turned out of their fold, and was much amused by the strange antics and great demonstrations of affection bestowed upon three of their number by a fine cat, whose attentions were reciprocated in a more moderate way by her woolly friends. After an early breakfast Capt. C. and myself started for a mountain ranche about twelve miles off, which is used as a summer range, and where I saw the principal portion of his flock. On the way I came across some curious remains of an ancient pine forest. Portions of the trunks of large trees lay scattered on the undulating grassy surface, all that remained of them being in good preservation for the purposes of fuel, but too much splintered for timber. The branches and large portions of the trunks had wasted away and disappeared entirely, with the sole exception of the largest knots. In some cases a trunk from ten to twenty feet in length would be seen, and the remains of knots at intervals in a line with it would show that it was originally four or five times its present length. More curious still, some of these forest remains were on the flat, bare surface of large sand rocks elevated above the ground around them. It is a curious question as to how many years these fallen trees must have remained on the rocks where they grew, before those rocks were entirely denuded of the soil which had formerly sustained the trees. When we consider that in the present geological age the rainfall is light, and the action of the elements very slow in this neighborhood, and that no floods could reach these elevated points, we must concede a great many years as necessary to wash away the soil in this manner. These trees have, therefore, lain where they fell, while generations of red men have come and passed away; and their preservation while exposed to the long continued action of those elements which have taken away the soil that formerly supported them, is a matter of great astonishment.

We drove from the mountain ranche to Fort Saunders, and thence to Laramie City the same morning, making a distance of over thirty miles, and a very pleasant drive of a character to give one an excellent appetite. The Laramie mountains are objects of great interest in this southeastern part of Wyoming Territory. They have a nucleus of granitic rocks, with numerous veins of quartz; the head branches of Crow, Lodge Pole, Horse, and Chugwater take their rise near the extreme western edge of the mountains, and cut deep gorges through the main line of its crest, presenting some very fine scenery. The Laramie river has a magnificent canon. The great peak of Laramie is a grand object of interest, dominating the country for an average radius of one hundred miles or more, almost always in view, and constantly inviting one to a nearer acquaintance. The rare, dry atmosphere deceives one's vision, and makes forty or fifty miles appear so short a distance that he is half tempted to try it as a morning's walk. We hear stories of wonderful masses of iron to be found here, one being 637 ft high, the exposed mass containing a great many million of tons; and from the character of the formation—similar to an immense dyke or trap—the portion concealed beneath the surface is supposed to be enormously larger than the mountainous peak above ground. One sees also some fine specimens of copper ore from this region, and there are not wanting rich possibilties, perhaps one might say probabilities, in the way of silver and gold. But against all these temptations, and those of excellent fishing and hunting superadded, one has to balance a very considerable variety of difficulties, which in my case I found so great as to make it unadvisable to attempt any exploration of the mountains. Regularly organized and well appointed parties of tourists, hunters, trout fishers, or explorers, will, I think, generally find few very serious difficulties in their way. This season the Sioux Indians, whose reservation is north of the Platte, are very unsettled and discontented, and they are such dangerous neighbors that very small parties cannot penetrate the mountains without incurring unreasonable risks. Next year these risks will probably be much diminished; and in any event an Englishman who has plenty of time upon his hands, and can await in some other places of interest the organization of some one of the military and other parties sure to visit these mountains, will be able to enjoy in a variety of ways a very great treat. There will also be an excellent chance of excursions, military or civil, into the Black Hills, to the northeast, where General Custer's command has been exploring during this season, and whence he has sent such glowing accounts that I presume they have attracted some little notice in England. E. A. C.

WYOMING, OCT. 2.

Carter Station, 904 miles from Omaha, and at an altitude of 6,550 feet, is a very uninviting place, in the midst of the alkali desert. I stopped off here for Fort Bridger, an army post, about eleven miles distant. The road is a somewhat rough up-and-down-hill affair, with gray sage brush on either side, and occasionally a few small struggling tufts of fine grass. On the sides of the butes near it are numerous mountain cedars, some of them perhaps a thousand years old. The largest trunks are perhaps 1½ feet in diameter, the greatest spread of branches may be 10 feet, the greatest height 12 or 15 feet. Each venerable dwarf stands alone in his uncouth strength, a sort of monument to the virtue of perseverance under great difficulties. The wood of these trees is not easy to work, but it makes beautiful furniture. It is used, however, chiefly as fuel. The post is nestled in a beautiful valley, with babbling brooks running through and around it. It was named after a famous hunter, trapper and guide, Jim Bridger, who passed about fifty years of his life in the wild regions of the Rocky Mountains. He was a great favorite with the Indians, and, with a natural fondness for mountain scenery, he traversed the country in every direction, sometimes accompanied by an Indian, but oftener alone—the beaver that he caught making his excursions as profitable as they were interesting to this wildest of mountain Nimrods. He familiarized himself with every mountain peak, every deep gorge, almost every hill and landmark, in an immense region of country. Few objects of interest to a hunter escaped his scrutiny, and he was said never to forget what once he had seen. By long intercourse with Indians, he learned their languages, became familiar with their signs, adopted their habits, conformed to their customs, was imbued with some of their superstitions, and at length excelled them in strategy. In the course of his chequered life he saw marvels enough to have formed the stock-in-trade of a regiment of fair-weather travelers, and of novelists after—generally a very long way after—Fenimore Cooper. But the actual marvels, of which he had seen so many, never satisfied Jim Bridger; he delighted in tough yarns, in which he was quite an artist, telling his most Munchausen-like stories, with such an air of literal accuracy, and with such an appearance of honest indignation at the slightest shadow of doubt, as generally enabled him to impose upon the credulity of the unwary. Mr. Hepworth Dixon, in his trip across the American continent, became the prey of artists far less skillful than old Jim; and it is almost a pity that he did not have the fortune to meet the greatest liar on the American continent, and extend his very interesting book to three volumes in consequence. Bridger built a ranche on the site of the present post, where he had a few cattle

in partnership with one Vasquez, who was, I think, a Mexican half-breed. When the Mormon pioneers first passed this way to Salt Lake, he probably acted as their guide. At any rate, he so far sophisticated President Brigham Young—who was even then an old bird not easily caught with chaff—that he bought out Bridger, who pretended to hold a stretch of thirty miles under a Mexican grant, paying him down $4,000 for the grant, the shanties, and cattle, and agreeing to pay $4,000 more at a subsequent time. The place became too hot for the Mormons; they had to leave, and Bridger rented his pretended grant to Gen. A. S. Johnson for a military post, for $600 a year, on a ten years lease. Taking a copy of his provisional lease, he then journeyed to Salt Lake, and succeeded in raising the other $4,000 from the Mormon prophet. But the contract, to be valid, must be confirmed at Washington. A diligent search revealed the fact that there was no Mexican grant, and that Bridger was kindly obliging the government for a substantial consideration with a piece of its own property. The bargain consequently fell through, and the post was established without payment of rental; but old Jim had the pleasure of spending the $8,000. President Young has made repeated applications to have his claim allowed; but, although it is undoubtedly quite as good as many another that has passed muster, it is very unlikely that the prophet will ever find profitable his $8,000 investment in Bridger. He still maintains, however, that he was never so unwise as to be diddled by old Jim; that his deeds are all right in his possession; and that it is nothing but the wilful injustice of Uncle Sam that withholds from him this magnificent domain.

Fort Bridger is on a military reservation, originally 20 by 25 miles, now cut down to small dimensions, the balance being about to be placed on the market for sale. The bottom land of Black's Fork near the post, and, I should think, for ten miles on the stream, is about half a mile wide. The fork divides into numerous channels, which are generally bordered with willows, and often dammed by the persevering beaver, and thus the bottom land, which is generally very good, is irrigated by nature and this little animal to a rather remarkable extent. About two miles off is Smith's Fork, parallel with Black's, and having a like bottom land. A few miles from the fort it joins the Black, which then flows some fifty miles to Green River, which might perhaps be considered the main Colorado, as it is the longest fork of that river. Notwithstanding the piscatorial proclivities of the officers and soldiers of the garrison, these streams are still pretty well stocked with trout. I formed one of a party of four the day after my arrival. We were on the fishing grounds about five hours, and we took 196 trout, some of them very fine

ones; but, as I am not an adept in the art of fly fishing, my share in the take was exceedingly small. Some days after, two adepts went over to Henry's Fork, a few miles distant, and caught upwards of 250 in a few hours. Earl Dunraven and his party were at the fort two days before me, and, having procured the necessary outfit, went into the Uinta mountains in search of large game. They stayed but a few days, and were not very successful. They wounded severely the only bear that they saw, but they did not succeed in adding him to their score.

Saving the presence of the general commanding, the great man of Fort Bridger, and of all western Wyoming for that matter, is Judge Carter. He is the post trader, and a general wholesale and retail merchant; he is a lumberman, with several saw mills running in the mountains; he is a stock man, with some 2,000 head of cattle; he contracts for forage, fuel, meat, &c,, for the government; he builds roads and bridges on his own account; and he drills through the Wyoming rocks for oil. Through the kindness and liberality of his brother-in-law and partner, Mr. Richard Hamilton, I was provided with a driver and team to go into the mountains and meet the judge, with Generals March and Whipple from Washington, and two prominent civilians, his guests, who were out on a hunting excursion. There was no lack of horses, but they were for the most part in a herd some seven miles off, and my driver took the first to hand, one white and the other bay, and harnessed them together. We started well enough, but before we had proceeded half a mile white was doing a very queer sort of three-legged gallop at the rate of about four miles an hour. We were soon very doubtful of the practicability of proceeding, but, thinking that we might possibly reach the herd house and exchange our team for a better one, we drove a little further. It was of no use, however, and we turned back, the beast's lameness improving as we neared the post. Driven two or three times around an open square there, he limped no more—there was nothing whatever the matter with him. I determined to start again, and the ungainly brute became lame as before. This time, however, I was not to be deceived, and, after four or five miles of desperate effort, he gave up lameness as a bad job. At some ten or twelve miles distance, by a very good road, we met the first outlying fringes of the timber. Here was a beautiful mountain rill of pure water, and for a few rods on either side there was a luxuriant growth of wild geraniums, blue bells in blossom, and other beautiful plants, and these increased in number and variety as we proceeded. We were soon in a dense growth of evergreens, with grasses and perennial plants wherever the rays of the sun could penetrate. Occasionally we passed t[illegible]ough an opening of bare poles

deadened by an accidental fire. Here the perennial vegetation was decidedly luxuriant, the tints of spring, summer and autumn strangely blended together; and then we would pass through an open pasture ground, or a natural meadow, as green as growing grass could make it. Thus we journeyed twenty-nine miles, till we reached, a little after dark, a saw mill belonging to the judge. We unharnessed and tethered our horses here, and had a substantial supper. I heard that the party we were in search of were about four miles off, and, the full moon being up and shining brightly, I proposed that the day's journey should be ended by walking over to them; but fatigue, and my interest in a number of excellent local bear stories, particularly of the grizzly species, overcame my ardor, and I wisely determined to have a shakedown in the sawmill.

E. A. C.

WYOMING, OCT. 9.

The next morning, leaving the "buggy" and some *impedimenta* behind, I was mounted betimes, and away for the camp. No longer following the judge's road, we wound our devious way through ravines and up long mountainous ascents, the path frequently covered with large loose fragments of the old red sandstone of which the Uintas are mainly composed, and sometimes twisting its way among fallen timber which the engineers who laid out the road had been too lazy to remove. An occasional tree was "blazed" or marked by the axe, as a guide to the traveller, and occasionally a small one, which would have rendered the passage of any kind of a vehicle absolutely impossible, was felled, the stump being left about fifteen inches in height. We crossed a small prairie called Gilbert's Meadow by the scarcely perceptible trail made on the short grass by the hunting party two days before, and we went down a sharp bluff, where we were obliged to dismount and lead our horses. The party had passed here before us with vehicles, which they were obliged to let down with ropes. All this is nothing very extraordinary for a mountainous country, and it would be unworthy of note but for one circumstance. This magnificent road was built by a squad of United States Engineers, under an officer drawing full pay as an efficient, and they were protected, assisted, or kept to their duty by a company of cavalry. Practically, it was a summer's work. I have no idea how many thousand dollars a mile it cost the U. S. Government, reckoning loss and wear and tear of horses, mules, wagons, arms, ammunition, &c., and the rations and pay of the officers and men; but I am positively certain that I could find a couple of backwoodsmen to locate, lay out, and make in a single day the portion of this

road that I traveled over, and I would guarantee that the work should be so much better in style and finish as to save any vehicle one to two hours in traveling the seven miles distance. I have had much faith in the engineer officers of the American army; I have often thought that it was a pity the building of the great transcontinental railroad was not entrusted to them; but I must confess that, if one is to judge a possible large work by a small one completed, the two thousand miles of railway, in the hands of the army engineers, would have been as great a burden to the American people as the whole of their national debt, with the trifles owed by England and France thrown in as a makeweight. The fact is, however, that we must not so judge. Those sent here to build a little road in the Uintas were practically beyond any adequate supervision, and the temptations of taking the trout from the streams and lakes, of watching the beaver houses for the chance of a shot, of hunting the deer and elk, of having an occasional encounter with the terrible and almost invincible grizzly, of climbing the grand old peaks, and of indulging in day dreams in pleasant picturesque nooks by the bubbling streams—these, and the other manifold attractions of the place, were too much for even their very great virtue. They went in for a fine time generally, and left the road in the condition in which we found it. It took us about three hours to reach the camp, which is about seven miles from the mill. It was pitched on a pine covered knoll jutting out into a rich meadow, through which flows the western branch of Smith's Fork.

After a breakfast of trout I started with rod and line to find Marcy Lake, where three of the party were said to be fishing. Without map or guide, but a hazy indication of direction and locality by a man who has never been there, a little mountain lake is a thing not always easy to find; and after a toilsome scrambling walk, at the end of which the mountain scenery began to grow decidedly less inviting, I was about giving up my search in despair, when I saw between the brown branches of the trees the bright surface of a mirror set in a deep frame of green, and I shouted for joy. It was a beautiful sight, and I came upon it just in time, for the fishing party had not been very fortunate, and they were just leaving to try their luck in the fork. I accompanied them, and fished with such fair success as satisfied my moderate wishes in a couple of hours, when, resigning my rod and the care of my trout to my driver of the day before, I scrambled off alone to explore more fully the neighborhood of the beautiful lake. It is about one-third of a mile from the Fork, and at a level of perhaps 150 feet higher. It is probably a mile long and one-third as wide, quite shallow in some places, and in others one can look down into its clear waters and seek for the bottom

in vain. It fills, in fact, a cleft in the mountain of unknown depth, but which, from the position and surroundings, I cannot suppose to be more than a 100 feet to 150 feet. A beaver dam maintains a nearly uniform level, the overflow from which at the time of my visit was barely sufficient to well moisten the middle of a small ravine. I walked round the lake, and admired its beauty from every aspect that a bright autumnal day could afford me; but I found the finest views from the northern end. Under the somber shadow of the pines, from a narrow green sward before me, peeped into the bright sunlight the eyes of a thousand blue-bells; then a fringe of aqueous plants a little further, with occasional channels or water pathways between, kept clear by the industrious beavers, some of which have just been frightened at my approaching footsteps, and left a tree partially cut down, or a pole half-way in the water, or some small sticks or perhaps a considerable log in the narrow water-path or in the clear cold lake, made of the tears with which the melting and never-melted mountain snow repays the persevering and most tender caresses of the summer sun; the deep dark lake, which spreads on either side and lengthens into the distance undisturbed by the slightest ripple; the bright green border; the dark heavy pines beyond, concealing much of the rugged character of the more distant landscape; while in the far distance, perhaps a dozen miles to the south, a grand old peak of sandstone towers high above intervening objects, presenting almost perpendicular sides, and having a general appearance which strongly suggests an ornate and vast cathedral pile. With this silent grandeur in the distance, and exquisite beauty at my feet, I had no need of sketches or notes—the sun picture was indelibly printed in color; and if my readers gain not a faint idea of its essential characteristics, it is owing to the inadequacy of the agent and of the vehicle of transmission.

On the western side of the lake was a beaver house, a well-made home, some 4 feet out of the water, and 10 feet in diameter. The entrances were plainly visible about two feet below the surface. A considerable amount of newly-cut timber was strewn around; the largest logs were about 5 inches in diameter, and the longest poles about 20 feet. The power, skill, and capacity of adaptation and of organized effort of these little animals are so great, that it is a pity we cannot introduce them into some of our London and suburban parks, to dam up a stream and build themselves a house before a large and appreciative public. I did some rough climbing on my way back, and was glad to overtake the fishing party in a meadow where I threw myself on the grass while they gave out their last kind invitations to our finny friends.

Judge Carter and I with regret bade adieu to the party the next day, and returned to the fort, having in my three days'

trip seen just enough of the Uintas to make me wish to extend it to a month. There are I know not how many lakes like Marcy, and many beautiful streams abounding in trout, of which there seem to be here two distinct river species—the one with white flesh, the other salmon-colored. They are both excellent eating; but it is the small individual of the salmon-colored species which perfectly satisfies the taste of the epicure. On my way back, my attention being called thereto by the judge, I was much surprised to observe how very regular and moderate is the descent by which Smith's Fork finds its way from the mountains to the vicinity of the fort. By this route a railroad almost to the very top of the Uintas is quite feasible, and it seems that for a number of years the judge has had the intention of making one. He tried at first to get a grant of adjoining land, which would have made it a certain success; but Congress had given so many million acres to the U. P. R. R. and others, that it would not venture to give a hundred thousand to him. He thinks of carrying it out yet, without a grant, and hopes to make it pay by the transportation of lumber, of which there are great quantities in the mountains. I hope he may succeed in his plans—and that somebody, an Englishman if possible—will establish a good cosy little summer hotel on the margin of some lake in the very heart of the Uintas. It would not, however, remain very many years the paradise of the angler and the hunter. There is a large amount of water in the streams; irrigation would follow nearly to the edge of the timber line, and dairy farming would go a thousand feet higher. In less than twenty years there would be a comparatively dense population for twenty miles or more above the fort, and in the meantime our little mountain house would have been enlarged to the proportions of a great American caravanserai, to accommodate pleasure seekers from among the dense populations then settled west of the Mississippi. The solitary places of America where the beautiful and the grand are well blended, and where fish and game abound, will be wonderfully thinned out in the course of twenty years more.

The next day I galloped to Bridger Butte, a sort of table mountain, about 600 feet higher than the fort, and having a level top of perhaps 2,000 acres area, covered with pebbles, among which are to be found numerous flints and moss agates. I ascended at the point nearest the fort, a decidedly toilsome undertaking, but I was rewarded by seeing a much better exposure of the strata than I should have found in places more easy to climb on the northern or western side. One can see some curious geological facts in climbing Bridger Butte, but there is no very strong evidence to corroborate Jim Bridger's assertion, that it has recently "slewed," or twisted, around a couple of hundred yards from its original position.

The real marvel of this Butte is, however, much greater than the one invented by old Jim. There can be no doubt that as many thousand square miles of the surrounding country as there are square acres on this Butte were originally at the same level. It was the gradual accretion of many ages, and it was swept away—in, comparatively speaking, a few years—by ice and flood, leaving to our time this small fragment as a sample of what the waters can make and destroy. Bridger Butte overlooks all the surrounding country, and the view from the top is a fine one. Far to the north and eastward are the Seminole Mountains, the sharp angular Uintas to the southward, and the more rounded peaks of the Wasatch to the westward; the everlasting snows tipping the highest points in every direction. Nearer at hand are many curious elevations, among which Grizzly Buttes are pre-eminent; and nestling in the green meadows among the wood-skirted streams which, now uniting, now dividing, form the Blocking Fork, are the buildings of the post; while, a little beyond, Smith's Fork, uniting and dividing in the same way, is bordered by like fringes of timber, and fertilizes another ribbon-like oasis of meadow. Nearer and farther, all around, is the glaring brown desert and the gray-green sage-brush upon it. But upon these the eye dwells lightly; it fastens upon the meadows, made more lovely by contrast; it looks to the grand old peaks, and then to the changing clouds, tinged with the rays of the setting sun; and then one mentally exclaims, "It is well worth while to visit the great American desert.

E. A. C.

WOMAN SUFFRAGE IN THE FAR WEST.

WYOMING TERRITORY, OCT. 16.

I remained at Fort Bridger during an election of delegate to Congress and of some local officials. To a careless observer an American election seems very like an indiscriminate scrimmage at an Irish fair. The shillelahs appear to descend on the heads of friends and foes with the greatest energy and in the most reckless manner. But the man with the cool head and quick vision will soon perceive that there is a method in this madness, and a wonderfully arranged order in all this chaotic commotion. Not an enemy's skull is cracked but by the fore-ordination of fate, not a friend has a bruised sconce but for some presumptuous or unwitting offense against the laws of the gods. This is a tempting theme, and not altogether foreign to the province of one who would show the emigrant

fields of America as they are—not merely in soil, climate, and material aspects, but also in the character, culture, and social and political relations of the inhabitants. But it is too wide a subject for my present purpose. In Wyoming the ladies enter the political arena, and I am sure the readers of *The Field* will wish to know the reason and the result.

In every new country like Wyoming, to which there is no regularly organized emigration, directed and controlled by a Government with an eye to the future, the population consists very largely of adult males, who have no home ties, no fixed habitation, no definite intention of permanently remaining—no interest in the Territory, in fact, but one of a passing and very transient character. Such persons have the right of suffrage, and it would be impossible to take it away. They are prone to take violent likings and dislikings, and to vote for a man from personal predilections, regardless of his fitness for office. Their personal expenditure is generally extravagant, and their political tendency is in the same direction. Bold, but at the same time shrewd and careful, finance should be the strong point in the government of every new country; but this is quite the exception, and foolish, not to say wicked and reckless, waste of public money is the rule. This fact is to be attributed in no small degree to the vote of the young irresponsibles of the class I have mentioned.

Most of the women who emigrate to a colony go there for a more permanent residence. They have generally husbands or fathers with a stake in the country, or they are dependents in the household whose ideas of men, and of things social, political, financial, are certain to be more or less influenced by the opinions of those above them. The average class of women in a new colony is thus very much superior to the average class of men. Their views are often more narrow than those of some of the reckless rovers who have tried their luck in half a dozen colonies, and who are far below them in the social scale; but they are much safer, and even if left entirely to themselves, their judgment would be correct much more frequently than the haphazard decisions of the best specimens of floating humanity. But in this country, where of all others the women are most independent in their notions and habits, they still have a very strong tendency to defer to the judgment of their male relatives and friends. It would be an extraordinary thing, with probably a very good cause at the bottom of it, that would induce a wife to neutralize the vote of her husband, or an unmarried lady that of her father or brother. The broad results of these facts are: (1) The married man who has come here for permanent residence has, practically speaking, two votes against the one which the roving man is able to cast. (2) If he has grown-up daughters or domestic servants, he has three, four or more votes, according

to the circumstances, and in some rough proportion to his stake in the country. (3) The single fellows have no just cause of complaint, for they are open to qualify and double their vote, and in due time quadruple it if they like. I therefore pronounce unreservedly in favor of woman suffrage for all new countries situated like Wyoming.

But there are pecularities of a political canvass among the ladies which are very amusing to one who witnesses it for the first time, and of which the caricaturist could make a little capital. Mrs. A. discusses the matter for hours, the whole idea of each of her many circles of ratiocination being comprised in the fact that she will vote as Mr. A. does, because he knows best. Mrs. B. discusses the matter from another standpoint. She has an independent and inquiring mind. She is "not such a fool" as to be led by Mr. B.; indeed, B. can vote as he likes, and she will vote as *she* likes. She'll "scratch" such a man, and vote all the rest of the Republican ticket. [This scratching, by the way, is done with a pencil, and not by the nails. In consists merely in erasing from the list, or ticket of the would-be officials who belong to one party, the name of the offending candidate, and voting for the others.] "But," we inquire, "how will Mr. B. vote?" She has nothing to do with the way *he* votes, but, from the way he was talking last night, he is certain to vote the same way. Miss C. is a well-educated and prepossessing young lady, who has been staying for a long time with some friends. Her age is a little uncertain—she may be a year or two under the mark, or she may be over it; but noboby is going to challenge her vote, and she is going to cast it. She thinks Mr. M. is "splendid." She "likes him"—beyond all her powers of expression. No matter in the world what he did, she would vote for Mr. M. That is always her way when she likes anyone. Miss C. discusses no one but Mr. M., in season and out of season; but one finally discovers that Mr. M. is on the same ticket that her friends are going to vote; in fact, she will follow their lead, and at the same time make as great a sensation as possible. And thus from A. to Z., with rare exceptions, the madams and misses, with much show of independence and for many pretended reasons, vote precisely the same ticket that have the suffrages of their husbands and fathers.

Occasionally a young lady will "scratch" a political rival of her lover, and insert the name of the latter in a feigned hand instead; occasionally such a lady will plump the whole opposition ticket because her lover's name is among those upon it, and one or two of her special friends may sometimes do the same; but the sum total of these and all other exceptions is of little practical importance. Woman suffrage in Wyoming will be *for*, *in* and *of* all parties, but its tendency will be to make the better part of each party predominant, and there-

fore, for some time to come at least, it will prove a very good, useful and conservative innovation. It is fair enough to relate here, *cum grano salis*, a story from Montana. I never was there, and know nothing of the facts; but it is said that a lady of virile mind has been elected a justice of the peace by the "boys" of a certain district, and that she wields the power of her office with a vigor which leaves nothing to be desired in that direction. Her husband is decidedly fond of faro, draw-poker, and the like. She set the constable to watch his little games; he was caught in the very act of gambling, and with his companions incontinently haled before the justice. She fined them all round twenty dollars apiece and costs, and to the plea of her husband that she was altogether too hard upon them, and that she ought at least to remit the costs, she replied, "I haven't had a cent of pin money from you in an age, and I'll take it out of you now." A roar of laughter followed, but was instantly smothered as the stern voice of justice commanded "Silence in the court, or I'll fine everyone of you five dollars apiece." The fines actually imposed were quickly paid, the culprits disappeared, and the audience got outside as quickly as possible to indulge their laughter at the expense of the poor husband and his unfortunate companions, but at a lower price than "five dollars apiece." It is to be hoped that the justice's share of the costs was sufficient to get her a perfect love of a bonnet, in the latest fashion, even at the prices prevailing at Montana. I will add on my own account that a few such justices would be a great acquisition in Wyoming, Nevada, and some other States and Territories of the West.

In the course of a few years, when the young ladies of Wyoming become so numerous as to form a public opinion of their own, it may be expected that one party or the other will be severely handled for bringing out an ill-favored old fogy, while their opponents have in reserve the dashing young favorite of the fair. In that case the young ladies will undoubtedly "bolt," and teach the leaders of party to enter young blood if they wish to win the political races of the day.

All jesting and ridicule and opposition apart, woman suffrage is gradually and steadily making its way in America. It is not an unmixed good or evil, but is made up of contradictory forces. In the majority of the new communities the good will preponderate, for the reasons that I have given. In some of the older communities the evil will as certainly preponderate for a time. The intending emigrant may as well discount woman suffrage in advance, and if he has an inveterate antipathy to it, he had better stay at home.

E. A. C.

WYOMING, OCT. 23.

The election mentioned in my last passed of quietly enough. Soldiers were not allowed within 100 yards of the polls, the theory being that they remain citizens of the state, county, and city or town to which they belonged at the time of enlistment. A curious anomaly arises from this fact, and the woman suffrage. Col. Smith, and Capts. Brown, Jones and Robinson, have been here one, two, or three years, but they are still citizens of Maine, New York, Ohio and Kentucky, and they must not vote here. But as Mrs. Col. Smith and her daughter, and Mrs. Capts. Brown, Jones and Robinson, have not signed the articles of war, they have a perfect right to vote, and the like is true of the company laundresses. Thus, in the great war of politics and parties, an American regiment in Wyoming is represented exclusively by its petticoats, and an excellent representation it is. It answers all the requirements, being at once nice, neat, rich and costly.

I escorted my wife and the landlady of the hotel to the polls. The judges of the election were all of the masculine gender, and they were comfortably seated around a table near a window in the little hall of the post. The window was slightly raised; the voters came along the walk outside, deposited their curl papers, or documents very like them, had a chat with the judges inside, and then moved on. As the day was rainy, and there were no invitation to go in and partake of refreshments, or even to sit down, the chats were not of long duration, and the polls were by no means uncomfortably crowded.

They have a hotel at Fort Bridger, a thing quite unusual at an American government post. It is kept by an Englishman, who, with his wife, tries to make his guests as comfortable as possible. It is small, but still large enough to answer the present requirements of the public. It is, of course, impossible for the host to furnish the elaborate bills of fare of some of the large American hotels, but he can give in their season the finest of trout *ad libitum*, and the best of game, cooked as well as I have found it any where in America. His charges are moderate. An hotel of any description at an American military post is of considerable advantage to the traveling public, most of whom are entirely unknown to the officers of the garrison. Known or unknown, unless engaged in some public mission which requires him to sink minor considerations, one must necessarily feel some delicacy in going to places where, from the circumstances, hospitality must perforce be offered and accepted, where one is quite unlikely to have the opportunity of making a corresponding return, and where the entertainers are not always blessed with a superfluity of wealth. At the little Bridger Hotel there is no danger of intruding or out-staying one's welcome.

Wages in Wyoming are extraordinary, owing to the lack of organization to make the wants of the territory known in places where there is a superfluity of labor. Judge Carter informed me, for instance, that for eight months in the year he is prepared to pay $40 per month and board to forty English laborers, and that he would advance their fares for them under any reasonable guarantees. If they were married men, after they had remained two months with him, everything proving satisfactory on both sides, he would advance, under like guarantees, the fares of their wives and children. These men could also obtain themselves suitable claims on the government land, and establish themselves in comfort and independence. With care and prudence, they could each be in a position to work for himself exclusively in a couple of years. There are quite a number of other men who have an urgent demand for laborers, but the aggregate in a territory of some 30,000 population is of course small, and it would be very easy to overstock the labor market. A few drovers and a few good shepherds could get good wages the year round. There is a strong demand for house servants; men are necessarily employed to a great extent in cooking, washing, etc., because women are not to be had at any price. There is one woman servant at the Bridger Hotel, a very good one, and her wages are $30 per month. I could fill many columns with amusing descriptions of the straits in which ladies are frequently placed here for the want of servants, or because they have deserted just in the midst of some pressing emergency. It seems to a stranger very extraordinary that, with such a surplus of labor otherwhere, the people here cannot, through their territorial legislature, or otherwise, perfect such an organization as will supply their most pressing necessities. There are many excellent openings here for married couples, with or without money. Some few without children can obtain situations in families at very high prices. Quite a large number of others, whose children are not too numerous, or are getting large enough to be of some service, could take charge of ranches, very much to the advantage of all parties concerned. The real cash value of the woman's work in such a case is quite equal to that of the man. If a family have £50 or £100 clear on arrival, their position is enormously improved. They could easily get employment at a ranche—the wife to attend to the domestic arrangements, and the husband as a herder, exacting as a condition that their little surplus should be put into the herd on shares. It will often happen that the owner of a sheep or cattle ranche has too little capital to make his flocks and herds as large as his man can attend with advantage. In such a case, every £50 will tell heavily in the profits, and he will be very glad of a reasonable arrangement with his employe. In other

cases, where the capital is ample, the owner is fully alive to the fact that the herder with a little money interest in the flock will be by far the best man he is likely to get, and he also will accept the money on reasonable terms. Of course it is necessary to be reasonably careful in such an arrangement; but, as things are at present, the couple with their labor to sell, backed thus with a little money, could pick and choose, and they need run no risk beyond those ordinarily belonging to such a business in any country. Their money would be safer than in a flock of their own, if they had sufficient to start one; for they would of course place it in a flock whose owner had already acquired some experience in the territory. If they invested "on shares," they would be responsible for nothing, while their employer would have to account to them for their sheep, and the increase according to the terms of the contract; such matters should be reduced to writing in the first instance. The rapidity with which, under these circumstances, a nest egg would be surrounded by others, and then finally developed into a nice brood of chickens, is quite astonishing to those who have only witnessed the slow and painful progress of the poor man's accumulations in the Old World..

E. A. C.

WYOMING TERRITORY, OCT. 30.

From the rear of the Little Bridge Hotel there is a fine view of the Uintas. Large masses of snow here and there resist the most melting moods of the summer sun; but in the late summer and early autumn the huge bulk of the mountains is mostly bare, and many of the sharp details of peaks, forty or fifty miles away, are distinctly visible with a good glass, the clear bright atmosphere being even at that distance but a gauzy veil between us and the majestic beauty of nature. But that which was rain at Fort Bridger was a storm of snow in the mountains, and the day after the election they loomed up vast masses of snow, white or tinted or shadowed, according to contour, distance, and the position of the sun. The hunting party in the mountains had been very successful; but the snow storm was too much for them, and they beat a hasty retreat in good order and condition, bringing with them all of the spoils of the war. For my part I paid a visit to some oil springs, which Judge Carter is trying to develop, some 24 miles from the fort, and I met with a slight accident by the way which somewhat detracted from the pleasure of the trip. The road was rough at times, and there were too many badger holes in it for safe traveling with an unsteady team. Ours was a pair of "bronchos;" and, as these horses are generally left in almost their native wildness till they are wanted for

work at four or five years old, and then but carelessly broken, they are apt to be uncertain, and easily frightened. One stepped on the edge of a badger hole, was thrown into a panic, and scared the other. The neck yoke was broken, their heels flew about in a lively manner, and there was great danger of a general smash up. I jumped out on one side, and my companion with the reins on the other. While he pulled behind I got to their heads, and they were soon apparently quieted down. I then took the reins while he repaired damages. Observing a wound near the fetlock on one of the horses, I proceeded with some caution to examine it. It was a very unwise proceeding. I had miscalculated the angle at which a broncho can kick sidewise. I received a blow on my right hand and leg, and then both horses made desperate efforts to get away. I succeeded, however, in holding them, and was scarcely aware for the moment that I was hurt, but on pulling off my right glove I found the little finger dislocated at the knuckle joint, and the second and third fingers considerably bruised. I tried in vain to set the joint, and then called my companion to my aid. We both stood on the reins; he pulled my finger with both hands, and with all his might; I pushed as hard as I could on the under side of the joint, and after three or four efforts we reduced the luxation. I wrapped my handkerchief around my hand, and we proceeded; but the pain of that little hurt was excruciating, and I needed much a stimulant which we had neglected to provide for our journey.

The next day I examined the oil springs and the geological formation around them as thoroughly as my limited time would permit. The strata are tumbled about in wild confusion; in the immediate vicinity of the springs they incline at an angle of about 60 degrees to the horizon, and consequently the conditions under which oil may be obtained here vary considerably from those prevailing in Pennsylvania and in the province of Ontario. There is a bed of some fifteen to twenty-five cubic yards of asphaltum and heavy oil in sufficient quantities to become an article of merchandise is oozing out of the ground between a stratum of sandstone and one of shale. There is, therefore, a strong probability that one or more large reservoirs of oil exist in the bowels of the earth below. Judge Carter has decided on the question of how to reach the oil by boring where it oozes from the rock, and a very eminent geological authority has expressed an opinion that he is right. In my humble judgment the oil follows the inclination of the strata in coming up at this point, and the stratum below it, forms one side or boundary of the reservoir. As the judge must bore perpendicularly he is, therefore, boring *away from the oil* instead of going towards it. He may by accident hit another fissure containing oil, but he

certainly will not, by boring on the present spot, tap the reservoir which gives the promising surface indications that have tempted him to the outlay. It will not, however, cost a very considerable sum to drill another hole after he has failed in this one, and I wish him such abundant success as shall reduce the price of oil from 60 cents to 25 cents per gallon. The present high price is owing chiefly to the great expense of land transportation from Pennsylvania. A "Pre-Adamite Oyster Saloon" once did an enormous business at this place, and some hundred thousand years or so before that there were prodigious dealings in scallops, as indicated by some 20 feet thickness of the shells of this bivalve, evenly spread under a region of indefinite extent. Coal abounds, and good building stone also.

On my return journey I passed some very interesting mineral springs—sulphur, soda, silicia, and chalybeate in various combinations and degrees of strength. Those containing silicia and iron have built themselves mounds the largest of which is about three feet high and about eighty feet in extreme diameter, etc. The time and facilities at my disposal would not permit of thorough examination. I intended to visit them again, but was unable to do so.

My next excursion from Bridger was to the far-famed Grizzly Buttes. I accompanied Judge Thompson and the champion angler of the fort in an ambulance to their fishing ground on Smith's Fork, whence I walked some four miles across a sage-brush plateau. This plain has a sterile porous alkaline soil, which would, however, be rendered fruitful by the presence of sufficient water. Between it and the Buttes is a valley some eighty rods wide, in patches of which the alkali has been so far washed out of the soil by a running stream that there is a luxuriant growth of grass. This process of washing is progressing with considerable rapidity. I tasted some very fair water from a spring, but the main spring was white with alkali. Crossing this, I scaled the Buttes at the nearest point, a task by no means easy. The angle was about 60 degrees with the horizon, and as I progressed I found it impossible to get a secure foothold. There was generally a slight crust of dried adobe or alkaline clay, beneath which was the hard, slippery mass, damp from the recent rain. Fortunately, I had a stick, which I converted into an alpenstock with the aid of my knife. Slender, sharp fragments of jasper lay about in profusion. Managing my stick as best I could in my damaged hand, I used a jasper fragment with my left, and so dug and scrambled my way to the top; but before arriving there I began to think that it would have been wiser to have sought an easier place of ascent. Where I ascended this Butte it is, I think, wholly cretaceous, but away to the right there are probably overlapping tertiary strata. The steep sides are entirely destitute of vegetation, but there are

inner angles and places of lodgment, whence the soil is not carried away as fast as the alkali is washed out of it. In these places there is vegetation, and in some of them it is quite luxuriant. The top is nearly level, and from it one obtains a number of very curious views. In one direction stands a large cone connected with the main Butte by a wedge-shaped mass of less elevation. This central cone has several sub-cones of less elevation attached to and surrounding it, and some of these again have attached to them others of still smaller size. The inner angles are sharp, the sides are straight, and the ground plan is a complicated series of scallops and arcs, of greater or smaller dimensions.

In another direction there is a similar series of pyramidal forms, the outer edges being, however, somewhat rounded. And so, with cones and pyramids and combinations of the two, there is apparently an interminable succession of walls and bastions of silent and retreating angles. Concealed behind such forms as these, I found an irregular ravine, containing a little stream of clear water, from which I drank copiously, having found it very good. I expected to find it so alkaline as to be both dangerous and distasteful. Immediately after rain this is doubtless an alkaline, muddy torrent; but, as the very steep portions of the Butte cease to drain into it, and it receives only the drippings from the much slighter inclines near its source, whence most of the alkali has been already washed from the soil, it thus becomes purer and more pure as its volume diminishes; and we have the apparent anomaly of good water issuing from the source of all impurity, while the main stream in the valley below is full of alkaline from these very buttes.

Nature's process of washing the surplus alkali from the cretaceous soils of Wyoming is comparatively slow, but it is very sure, and its results will show in an accelerated ratio as time progresses. As the grasses spring up, they will hold more moisture than the barren earth, and as the moisture increases the grasses will grow. The Westmoreland hills are so very green because they milk the clouds, and they milk the clouds because they are so very green. If they were formed of the barren non-conducting adobe, the rainfall of the region would be vastly diminished. But the question of rainfall is too important to be discussed at the end of a letter, and I must leave it for the present. Fort Bridger, with its quiet little hotel, its combination of seclusion, good society, and social enjoyment, its distance from the world, and its telegraphic communication with "all creation," its hunting and fishing, opportunities for studying the geological formation and the mineral riches of the Territory, with its questions of oil and coal and mineral springs, of irrigation and railroads, and of woman suffrage and wages, presented to me many attractions, and I left with reluctance. E. A. C.

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Secretary	JASON B. BROWN.
Delegate in Congress	WILLIAM R. STEELE.
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Auditor	J. H. HAYFORD.
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Commissioner of Immigration	J. K. JEFFREY.
Superintendent of Instruction	JOHN SLAUGHTER.
Chief Justice Supreme Court	J. W. FISHER.
Associate Justices	E. A. THOMAS, J. M. CAREY.
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